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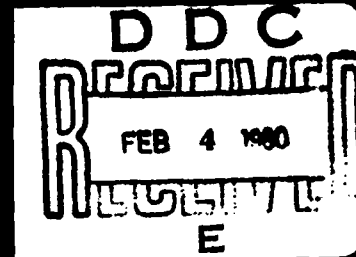
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Technical Report No. 363

DESCRIPTION OF DEPARTMENT OF
DEFENSE MANPOWER

by

C. David, R. A. Holmes,
and G. H. Smith

31 January 1978

Prepared for
Office of the Secretary of Defense
Manpower, Reserve Affairs and Logistics

Under

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ABSTRACT

This report describes the Department of Defense work force with primary emphasis on the major occupational groups used in the Integrated Defense Occupational Stratification (IDOS) system. The report was prepared for the Office of the Secretary of Defense (Manpower, Reserve Affairs and Logistics) under Contract MDA 903-77-C-0142.

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SUMMARY

INTRODUCTION

1. This report describes the Department of Defense (DoD) work force with primary emphasis on the major occupational groups (MOGs) arising through the categorization of personnel using the recently developed Integrated Defense Occupational Stratification (IDOS) system.

PURPOSE

2. The purpose of the report is to:
 - Describe the DoD work force within a framework that allows military (officer and enlisted) and civilian (general schedule and wage board) subsets to be addressed both simultaneously and comparatively; and to
 - Demonstrate the utility of the IDOS system as a management tool for the analysis of the DoD work force.

BACKGROUND

3. The lack of a system by which the military and civilian DoD work force subsets could be classified into a common occupational structure has restricted the ability of DoD management to comprehensively describe, analyze, and justify the total defense labor force. Although a number of categorization structures have been developed, none has been applicable to both the military and civilian components of DoD. The requisite functional categorization of military and civilian occupations has been accomplished with the development of the IDOS system.

DESCRIPTION

4. The categorization of the DoD active military and civilian personnel into IDOS MOGs provided a description of the characteristics of the DoD work force (Figures S.1 and S.2). A few of these characteristics are:

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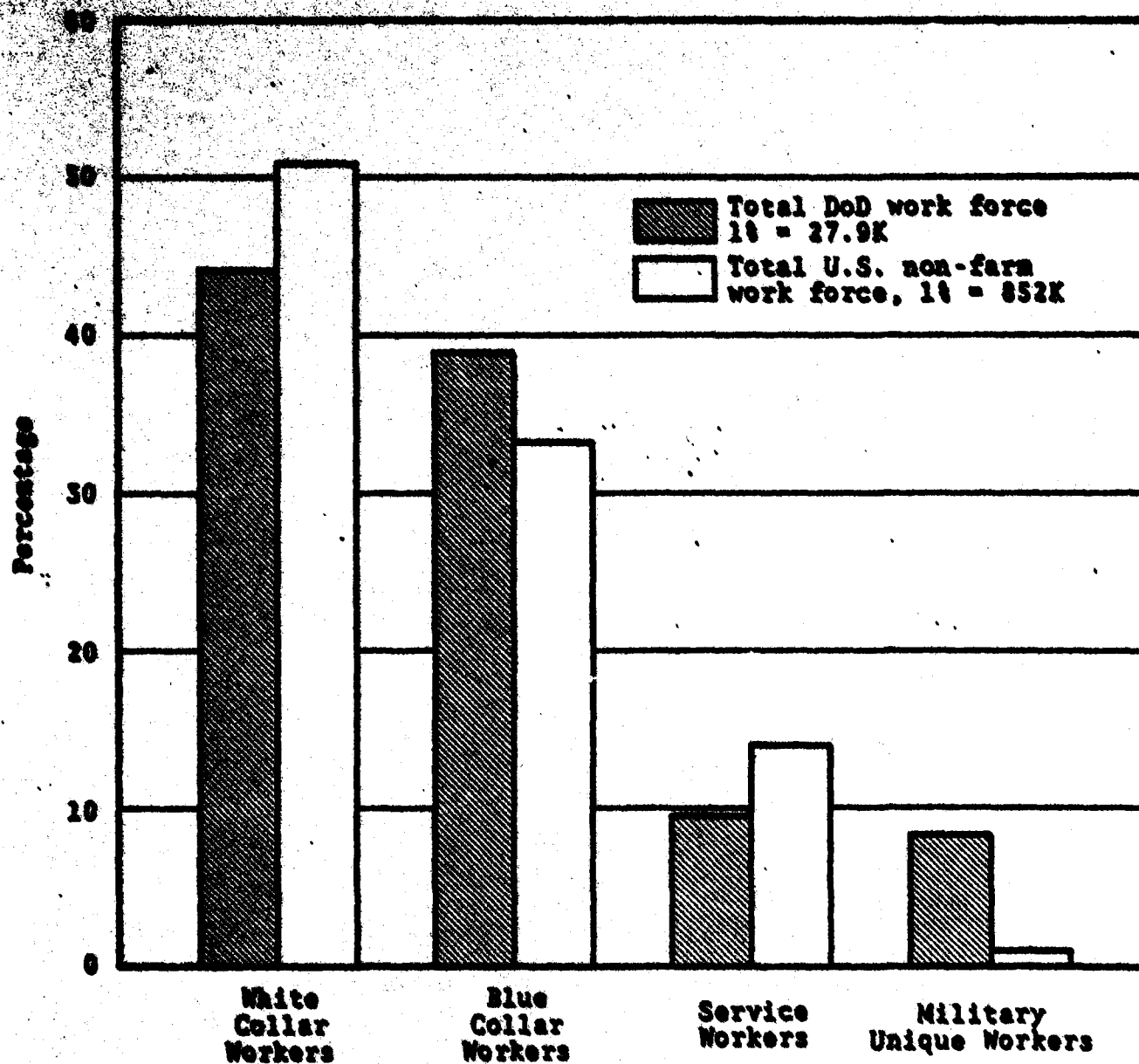


FIGURE S.1
TOTAL DOD WORK FORCE AND U.S. WORK FORCE
BY B.L.S. OCCUPATIONAL AGGREGATIONS

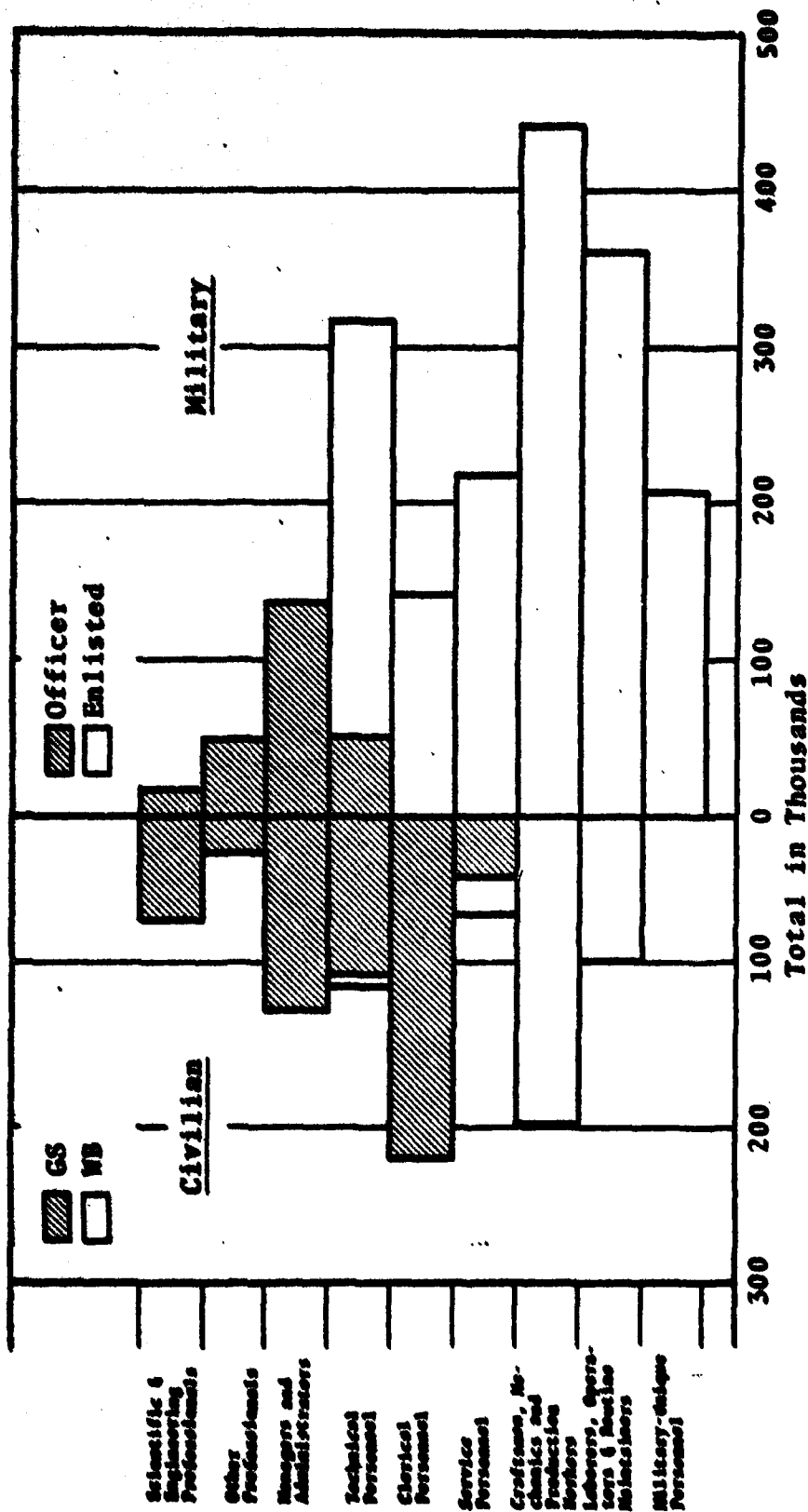


FIGURE S.2
CIVILIAN AND MILITARY TOTALS BY MAJOR OCCUPATIONAL GROUPS

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- 17% of both the DoD and U.S. work force are in occupations other than those classified as "blue-collar" and "white-collar"
- Only 1 out of every 10 employees in DoD has a military-unique occupation
- Only 10% of the total force are managers and administrators
- Fifty-three percent of the officers and 21% of the General Schedule civilians are managers and administrators
- Four out of every 10 General Schedule civilians are in clerical positions
- Almost 50% of the enlisted personnel are in blue-collar occupations.

5. Within occupational groups, the following significant differences occur among military departments:

- In "scientific and engineering professionals" the Navy had 50% more total personnel than the others, while the Air Force had a greater relative proportion of military personnel
- The Air Force had a larger percentage of technical personnel in its work force
- The Army uses proportionally 12% to 14% more civilians in the clerical area
- The relative number of general laborers in the Navy was larger than either the Air Force or Army
- Only the Departments of the Navy and Army have significant numbers of military-unique personnel (e.g., infantrymen, torpedomen).

CONCLUSIONS

6. The occupations of the DoD work force are best characterized through the use of a system that functionally categorizes all personnel into one common structure. From this basic structure, a number of similarities and differences in the mix of

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occupations within departments or for the entire DoD work force can be seen. Analysis of the entire work force, rather than just a subset, allows for the consideration of shifts of population groups into occupational groups based on the impact of one subset's occupation on another's.

7. MOS provides a structure that classifies occupations into 18 relatively distinct and separate categories. The MOSs are a good basis for comparison on a DoD-wide or department-wide scale since they classify personnel into groups that are detailed enough to define segments of the work force meaningfully without having too many categories to handle on a large scale.

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I. INTRODUCTION

1.1 This report describes the Department of Defense (DoD) work force using the major occupational groups (MOGs) of the Integrated Defense Occupational Stratification (IDOS) system. The objective of the report is two-fold:

- To describe the total DoD work force within a framework that allows military (officer and enlisted) and civilian (general schedule and wage board) subsets to be addressed both simultaneously and comparatively
- To demonstrate the utility of the IDOS system as a management tool. Acceptance of the work-force description contained here as meaningful and reasonable will fulfill this objective.

This report has been prepared for the Office of the Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics) under Contract MDA 903-77-C-0142.

BACKGROUND

1.2 As the need for a better understanding of the manpower required and used by DoD increases, one area emerges that is insufficiently addressed. Although a basic knowledge of the military and civilian work-force subsets exists, little is

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quantitatively known about the fundamental occupational makeup of DoD. In the past, no system existed by which both military and civilian personnel could be classified into a common occupational structure. The lack of such a system has been a barrier to management in analyzing, describing, and justifying the total defense labor force.

1.3 The functional categorization of occupations is required to support management in a number of decision and analysis areas, including those associated with:

- Overall analyses of defense occupational requirements
- Determination of requirement/inventory mismatches in various occupational groups
- Integration of military and civilian manpower planning
- Personnel occupational classification
- Interservice and joint activity assignment of personnel
- Civilian substitution planning
- Compensation equity
- Prior military as a source of trained manpower for the civilian work force
- Impact of defense manpower requirements on the civilian economy.

1.4 Several categorization structures exist which are applicable to only certain segments of the DoD work force. The structures and a summary of each are as follows:

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- The DoD Occupational Conversion Tables, developed by OSD (Manpower and Reserve Affairs), originally applied only to military occupations and used different structures for the officer and enlisted occupations. Although the Defense Manpower Data Center (DMDC) expanded the DoD Occupational Categories to include civilians in 1976, this system still divides all jobs into two non-overlapping sets, officer and enlisted.
- OSD previously adopted the Major Occupational Groups/Functional Occupational Groups (MOG/FOG) system developed by the Navy Office of Civilian Personnel to analyze the General Schedule (GS) and the Wage Board (WB)^{1/} civilian series.
- The MOG/FOG structure, however, does not include military occupations. The Professional, Administrative, Technical, Clerical, Other (PATCO) system used by the Civil Service Commission categorizes GS civilians only. Other federal agencies, such as the Office of Management and Budget and the Department of Labor, also have developed categorization structures, but place all federal civilian and military employees into one category.

^{1/} WB refers to all the pay plans used by the Civil Service Commission's Blue-Collar occupational series.

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INTEGRATED DEFENSE OCCUPATIONAL STRATIFICATION (IDOS)

1.5 The requisite functional categorization of military and civilian occupations has been accomplished through the development of the IDOS system. IDOS is basically an expanded and revised version of OSD's MOG/FOG system. The original MOG/FOG system classified all civilian occupations; therefore, the capability of handling military occupations could be provided relatively easily through appropriate modifications.

1.6 The framework of the IDOS system is the assignment of similar occupations into MOGs. The MOGs are:

- Scientific and Engineering Professionals
- Other Professionals
- Managers and Administrators
- Technical Personnel
- Clerical Personnel
- Service Personnel
- Craftsmen, Mechanics, and Production Workers
- Laborers, Operators, and Routine Maintainers
- Military-Unique Personnel
- Other Personnel.

1.7 The description of the IDOS system contained here is limited in detail to that necessary for the reader to understand the general composition of the MOGs used in the system. A more comprehensive description will be found in the system documentation to be delivered under separate cover.^{2/}

^{2/} Presearch Incorporated, Documentation of the Integrated Defense Occupational Stratification System, Technical Report 372, 13 February 1978.

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1.8 The MOGs in the IDOS system are classified further into 65 occupational functional subgroups (OFSGs). The OFSGs provide a finer level of detail to be observed within each MOG. The OFSGs are a refinement of the FOGs in the MOG/FOG system. The FOGs were revised to improve the capability of IDOS to categorize the entire DoD work force.

SCOPE

1.9 The report describes the DoD work force using data currently available through the IDOS system and, to a limited extent, Bureau of Labor Statistics data. The emphasis is on the MOGs within IDOS and, hence, the analyses performed in conjunction with the report preparation have been limited to those surrounding the identification of the similarities and/or differences existing among various subsets of the DoD work force (e.g., military/civilian, military department, officer/enlisted) relative to the distribution of the subsets across the MOGs.

Data Base

1.10 The data used as the basis for this report consist of Service occupational data structured into the IDOS framework. The data were obtained from the Defense Manpower Data Center (DMDC) and reflect the Services' inventories as of March 1976. The data elements presently included in the data base for the military and civilian occupations are:

- Service occupational code (as defined by NOC, NEC, MOS, AFSC for military and the Civil Service Commission's (CSC) GS/WB series for civilians)
- Pay grade

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- Total by pay grade for the Services and CSC's occupational codes
- DoD occupational code
- IDOS code
- PATCO code for GS civilians.

1.11 The data used in the IDOS system include all active military personnel and civilians employed by DoD under the GS and WB pay plans. The data base used does not contain any information on reserves, National Guard personnel, foreign nationals employed by DoD, or DoD civilians in other pay plans.^{3/}

CONTENTS

1.12 The ensuing sections describe the DoD work force. In Section II the work force is described in broad terms: (a) as a subset of the total U.S. work force, (b) in terms of occupational aggregations used by the Bureau of Labor Statistics, and (c) by pay plan and military service component. Section III presents a more detailed description that centers on the IDOS system's MOGs. Section IV contains a summary of the major characteristics of the DoD work force as well as certain recommendations about future enhancements and utilization of IDOS. The definitions of the IDOS MOGs are given in Appendix A. Appendix B contains a number of figures used to describe the MOGs in Section III.

^{3/} DoD does not collect data on foreign national civilian employees. The foreign nationals and civilians in pay plans not used equal about 110,000. Occupational data on guard and reserve military personnel are available in OSD and could be evaluated using IDOS. However, this report is limited to describing the full-time active military and U.S. civilian work force.

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II. GENERAL DESCRIPTION OF DoD WORK FORCE

2.1 In this section the DoD work force is described first as a subset of the total U.S. work force, second in terms of occupational aggregation used by the U.S. Department of Labor, Bureau of Labor Statistics, and finally by pay plan and military service component.

DoD AS SUBSET OF U.S. WORK FORCE

2.2 The total DoD work force ^{1/} (military and civilian) consists of approximately 2.79 million employees. As shown in Figure 2.1, this represents 3.4% of the nonagricultural employees ^{2/} in the United States. Figure 2.1 also reveals that:

- More than one out of every five nonagricultural employees in the United States are employed by either a state, local, or the federal government
- About 1 out of every 18 nonagricultural employees in the United States is employed by the federal government

^{1/} Based on Defense Manpower Data Center data for March 1976.

^{2/} Nonmilitary data from U.S. Department of Labor, Bureau of Labor Statistics, Employment and Earnings, Volume 24, No. 2, February 1977; military totals from IDOS data for March 1976.

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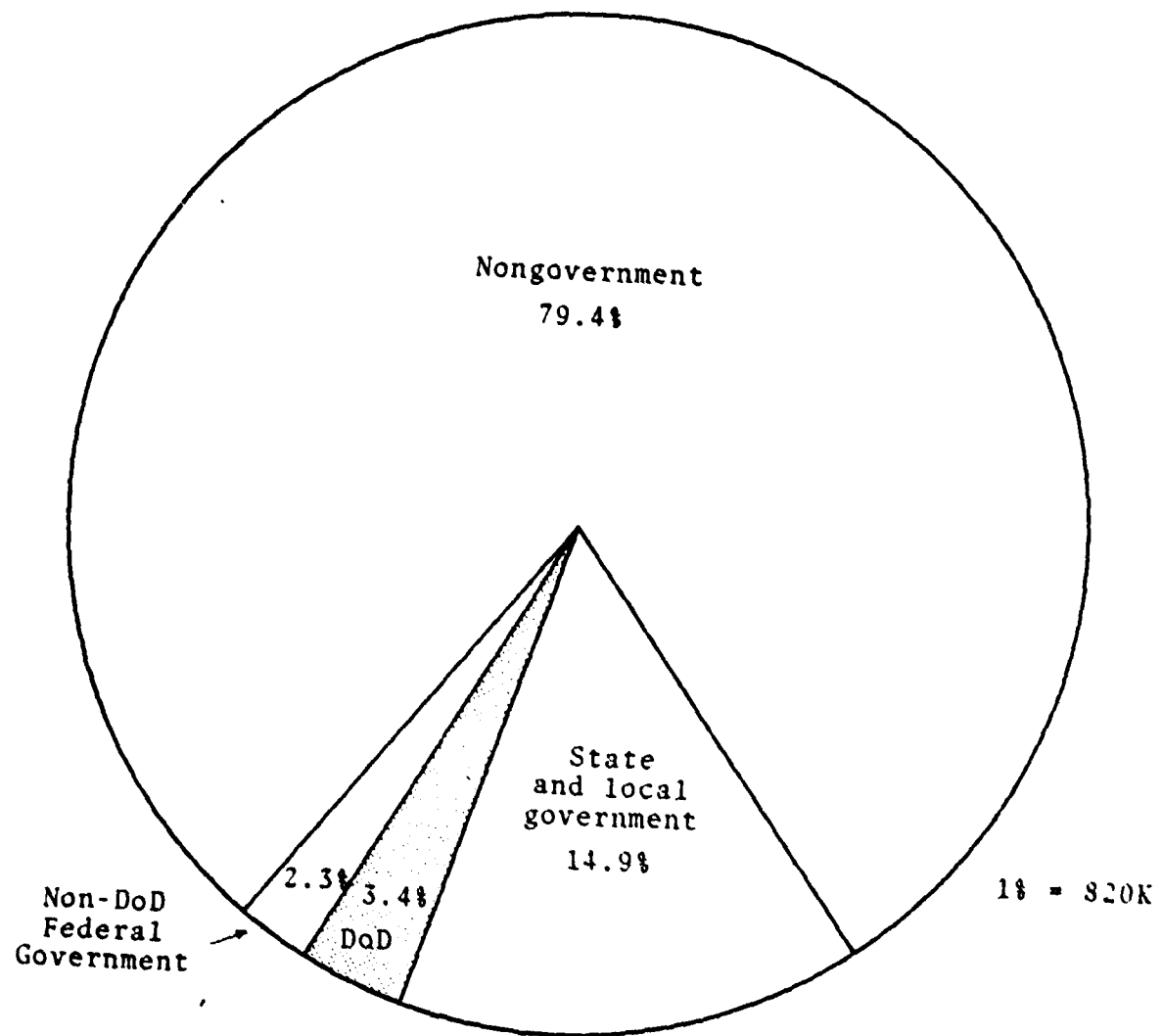


FIGURE 2.1
U.S. NONAGRICULTURAL EMPLOYEES
(Military and Civilian)

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- Approximately 6 out of every 10 federal government employees are employed by DoD.

2.3 To further place the size of the total DoD work force in perspective, the approximate sizes of other selected work forces/populations are displayed in Figure 2.2.

Occupational Aggregations

2.4 Bureau of Labor Statistics (BLS) household data (based on monthly surveys of approximately 47,000 occupied homes) allow for the aggregation of employed persons into four major groupings:

- White-collar workers (including professionals and technicians, nonfarm managers and administrators, sales workers, and clerical workers)
- Blue-collar workers (including craft and kindred workers, operatives, and nonfarm laborers)
- Service workers (including private household, food service, protective service, and other service workers)
- Farm workers (including farmers, farm managers, farm laborers, and supervisors).

In a similar manner, IDOS major occupational groups (MCGs) may be translated into four major aggregations--white collar, blue collar, service, and military unique--in which the first three are directly analogous to the BLS aggregations of the same name. The fourth aggregation represents personnel in a military occupation with no direct civilian counterpart and

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Work Force/Population

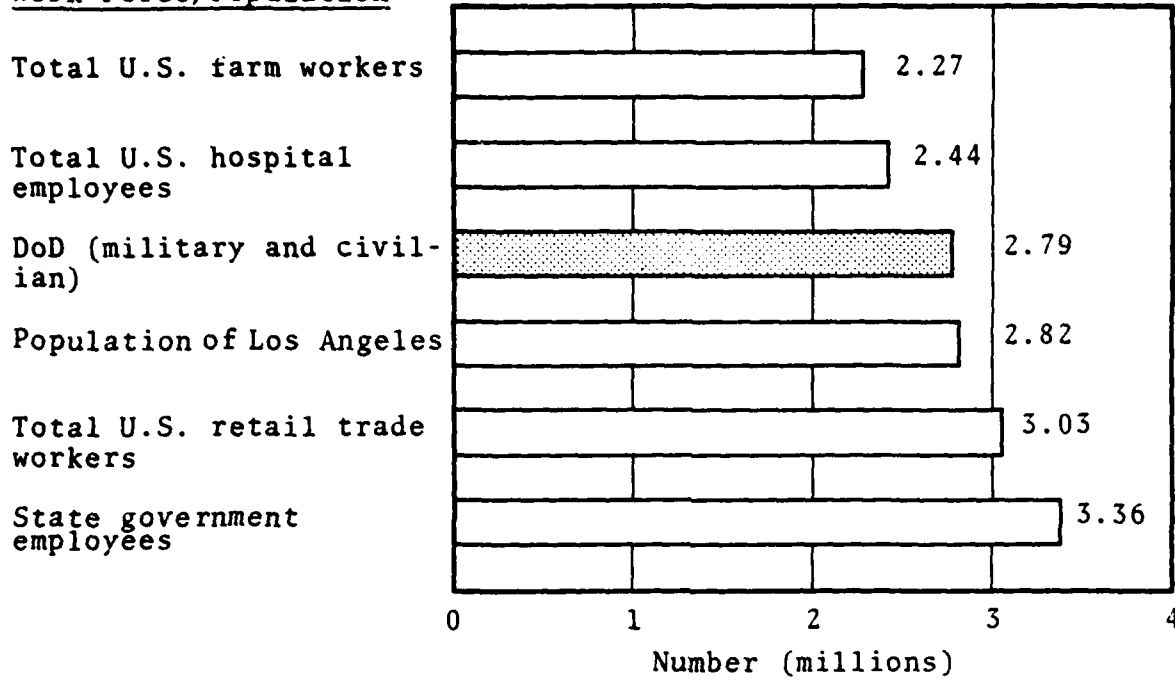


FIGURE 2.2
SIZE OF SELECTED WORK FORCES/POPULATIONS

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personnel employed by DoD but without an accreditable occupational field (e.g., certain students). The relationships between the BLS and IDOS groupings are displayed in Table 2.1.

2.5 An integration of civilian ^{3/} and DoD military data into the BLS occupational structure is illustrated in Figure 2.3. In this figure, the total U.S. nonfarm work force is distributed into white-collar, blue-collar, service, and military-unique occupational groups. Note that over half of the nonfarm work force is employed in white-collar occupations, whereas one worker out of every three is a blue-collar type. Less than 1% of the entire work force is in military-unique occupations.

2.6 A comparison of the total DoD work force and the U.S. nonfarm work force in terms of BLS occupational aggregations is outlined in Figure 2.4. The DoD work force consists of 7% fewer white-collar workers than the U.S. work force but has 6% more blue-collar workers relative to its total work force. The difference in white-collar figures is detailed in Figure 2.5, with the white-collar personnel broken down into their respective work-force components as defined by BLS. Although the DoD has a smaller overall percentage of white-collar workers in its work force, it does have 6% more professional and technical personnel relative to its size than the U.S. work force. In general, the sum of the DoD's white-collar and blue-collar workers (nonmilitary-unique/nonservice) and the sum of the U.S. work force's white-collar and blue-collar personnel (nonfarm/nonservice) both equal approximately 83% of their respective total work force. Therefore, in both the U.S. work force and the DoD work

^{3/} U.S. Department of Labor, Bureau of Labor Statistics, Employment and Earnings, Table A-21, Volume 24, No. 2, February 1977.

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TABLE 2.1
IDOS/BLS OCCUPATIONAL GROUPING CONVERSIONS

BLS Grouping	IDOS Major Occupational Groups
White Collar	Scientific and engineering professionals
	Other professionals
	Managers and administrators
	Technical personnel
	Clerical personnel
	Medical service personnel
Blue Collar	Craftsmen, mechanics, and production workers
	Laborers, operators, and routine maintainers
Service	Service personnel (except for the medical service personnel included in the white collar group)
Military-Unique/ Other	Military-unique personnel
	Other personnel

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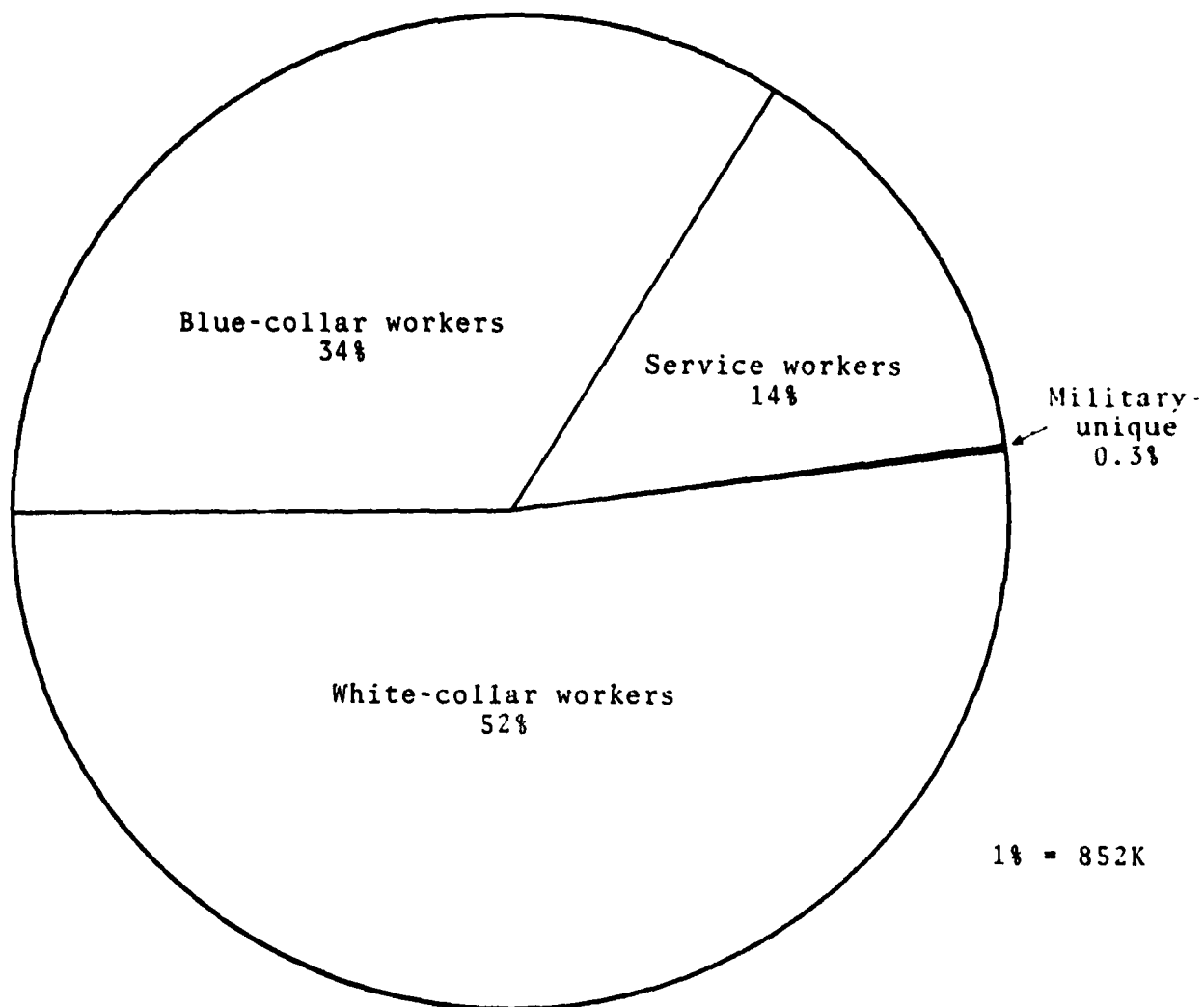


FIGURE 2.3
TOTAL U.S. NONAGRICULTURAL EMPLOYEES BY OCCUPATIONAL AGGREGATION

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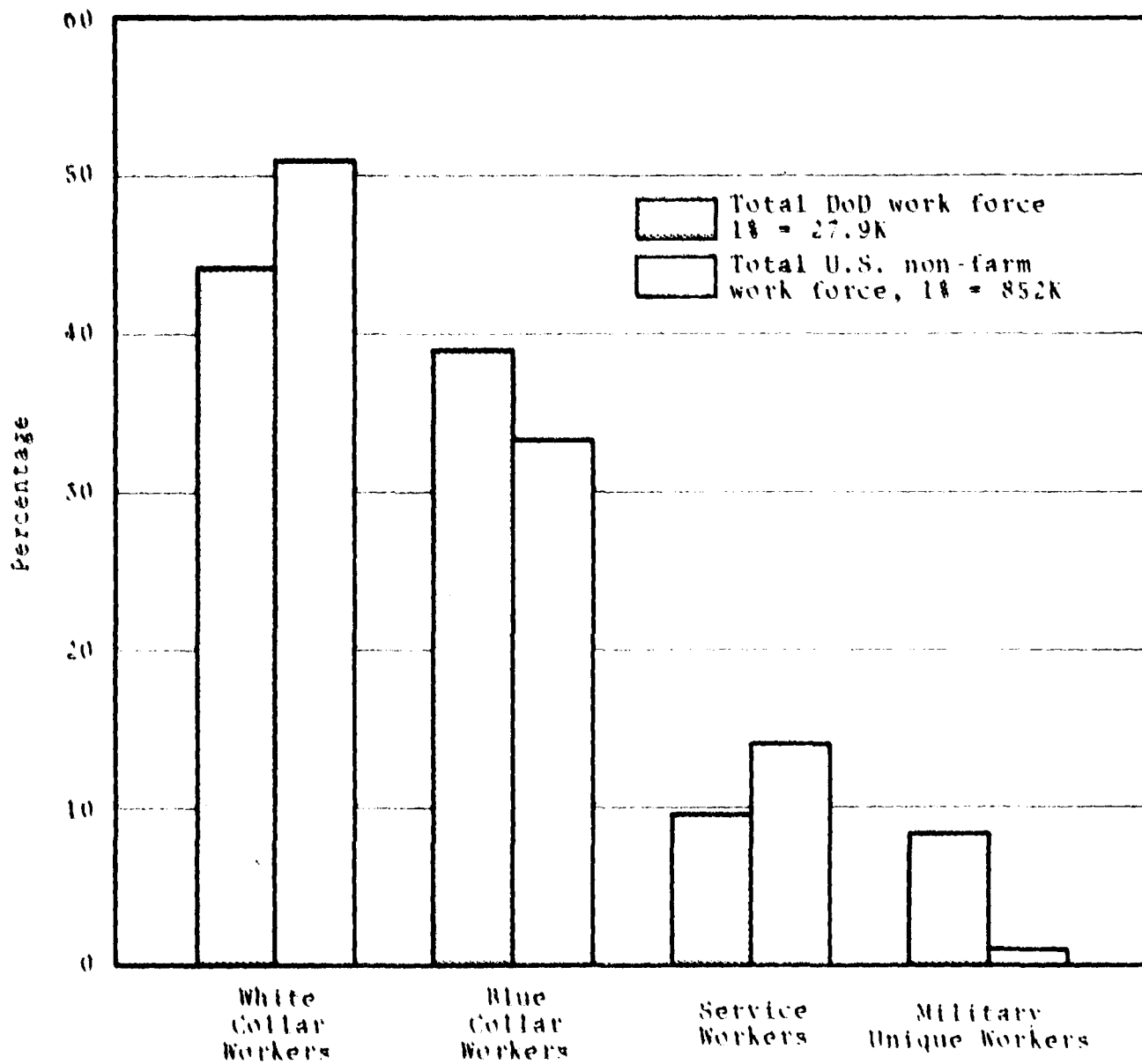


FIGURE 2.4
TOTAL DOD WORK FORCE AND U.S. WORK FORCE
BY B.L.S. OCCUPATIONAL AGGREGATIONS

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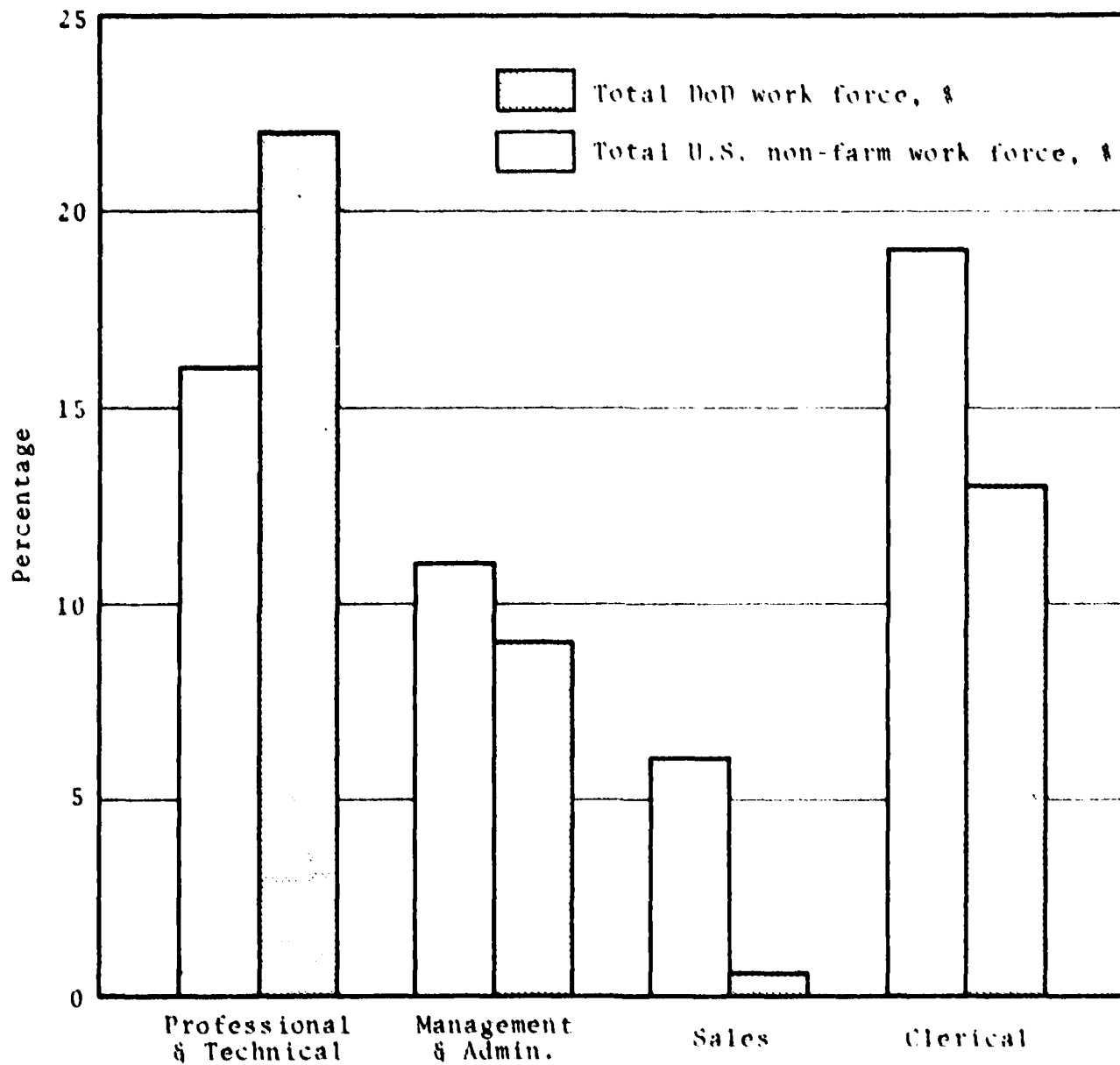


FIGURE 2.5
WHITE-COLLAR WORK FORCE COMPONENTS

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force about 17% of the personnel are in neither the white-collar nor blue-collar segment.

DoD BY PAY PLAN AND MILITARY SERVICE

2.7 The DoD work force can also be examined by pay plan and by service. The breakdown of the work force into the different types of pay plans is displayed in Figure 2.6. Nearly 65% of the work force are military personnel, 35% are U.S. civilians, and 3.8% are foreign nationals and other civilians in miscellaneous pay plans. Of the civilian personnel, 58% are accounted for in the General Schedule (GS) pay plan and 31% in the Wage Board (WB) pay plan. Military personnel break down to 7.5% in officer pay plans and 92.5% in enlisted pay plans. In all following work-force descriptions, the foreign nationals and miscellaneous civilians will be excluded from consideration because they cannot be categorized into occupational types.

2.8 Illustrations of the DoD work force in terms of Military Service and military/civilian breakdown are presented in Figures 2.7 and 2.8. The relatively large number of civilians in the Navy and the low number in the Marine Corps in Figure 2.8 are due, in part, to the support the Navy provides the Marine Corps in civilian-intensive areas such as depot-level aircraft repair. The sum of Navy and Marine Corps figures provides Department of Navy totals that have approximately the same military/civilian mix that is found in the Army and Air Force.

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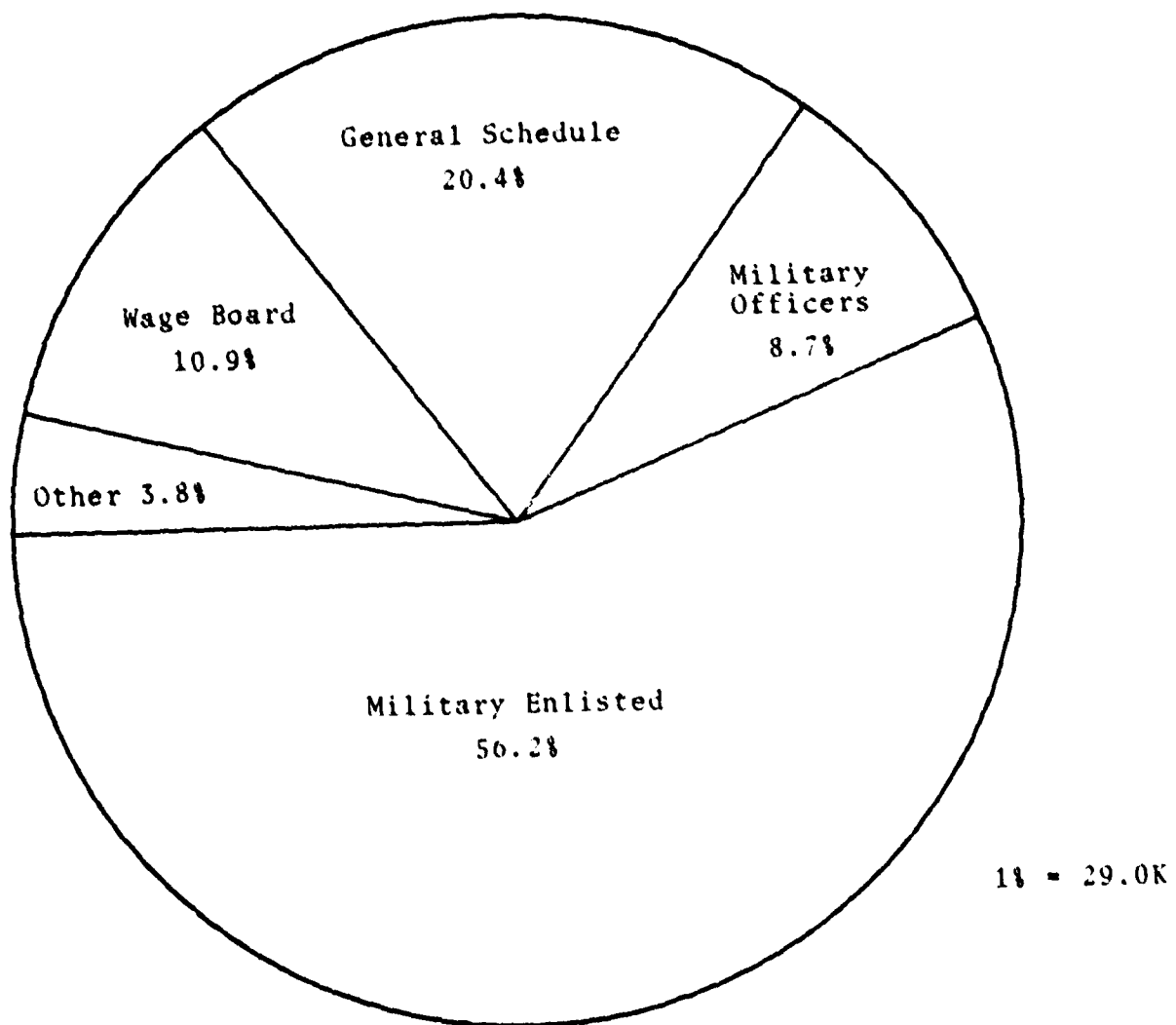


FIGURE 2.6
DOD WORK FORCE BY PAY PLANS

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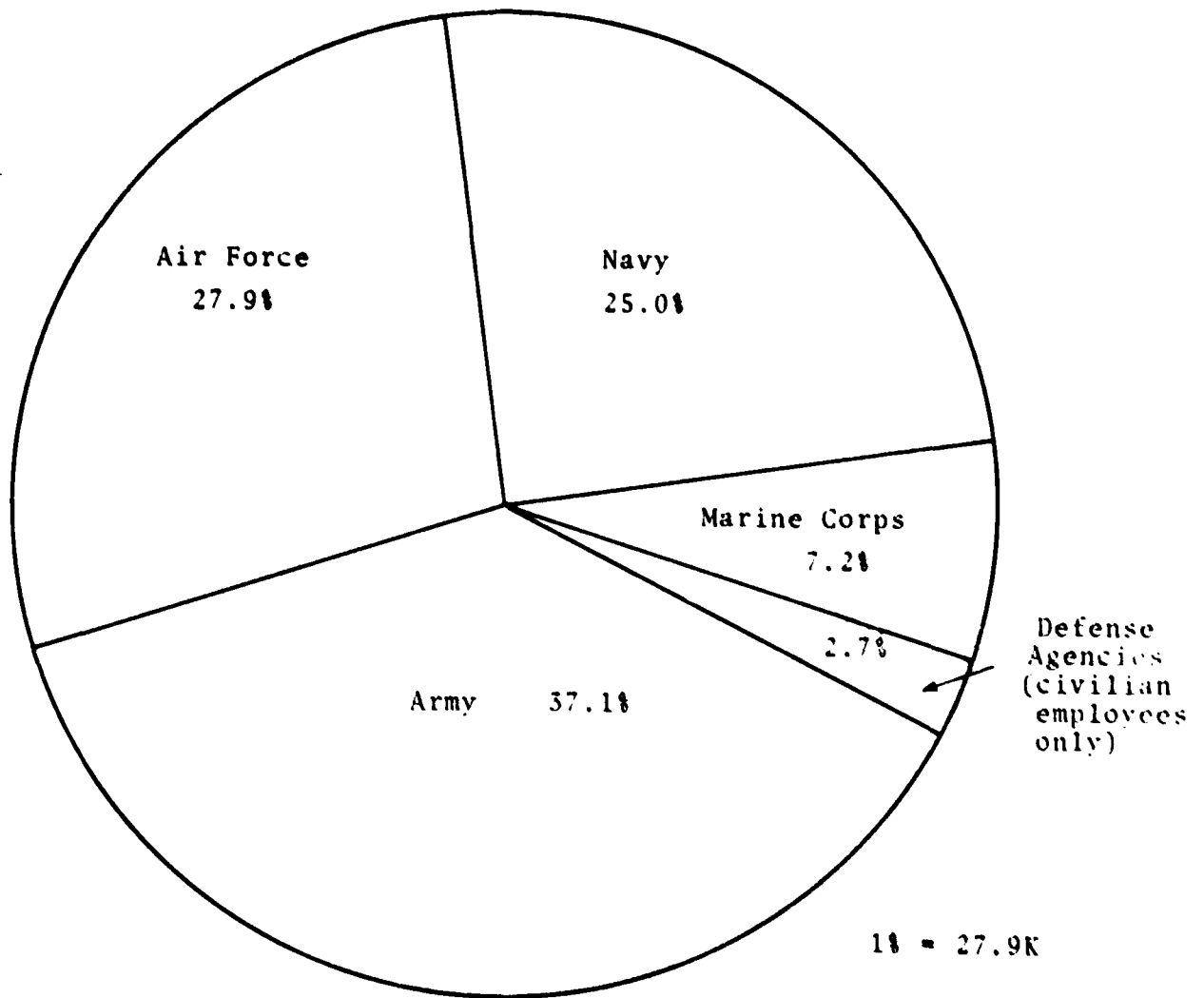


FIGURE 2.7
DOD WORK FORCE BY MILITARY SERVICES

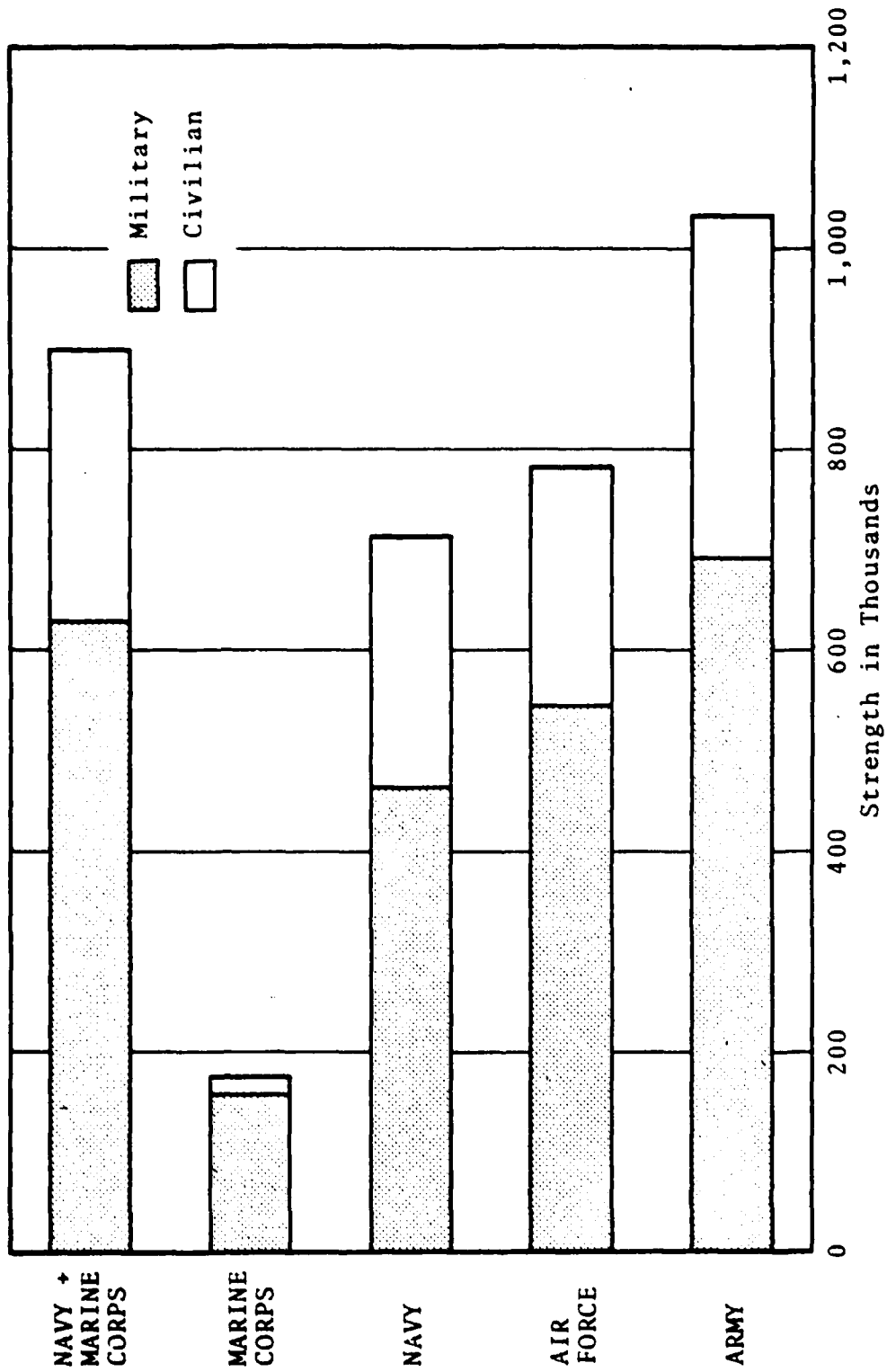


FIGURE 2.8
CIVILIAN AND MILITARY STRENGTHS FOR EACH SERVICE

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III. OCCUPATIONAL DESCRIPTION OF DoD WORK FORCE

3.1 This section is a description of the occupational profile of the DoD work force in terms of Integrated Defense Occupational Stratification (IDOS) major occupational groups (MOGs). The categorization of DoD and the departments by MOG is included with military/civilian, officer/enlisted, and General Schedule/Wage Board classifications for each MOG.

DoD OCCUPATIONS

3.2 The categorization of the DoD active military and U.S. civilian work force into the MOGs of the IDOS system is illustrated in Figure 3.1, which shows the following characteristics of the DoD work force:

- Nearly 10% of the work force are Managers and Administrators
- Only 7% of the occupations in DoD are military unique
- Approximately 5% of the personnel are in nonmanagerial professional occupations
- Almost 40% of the work force are in the blue-collar occupations, i.e., Craftsmen, Mechanics, and Production Workers and Laborers, Operators, and Routine Maintainers.

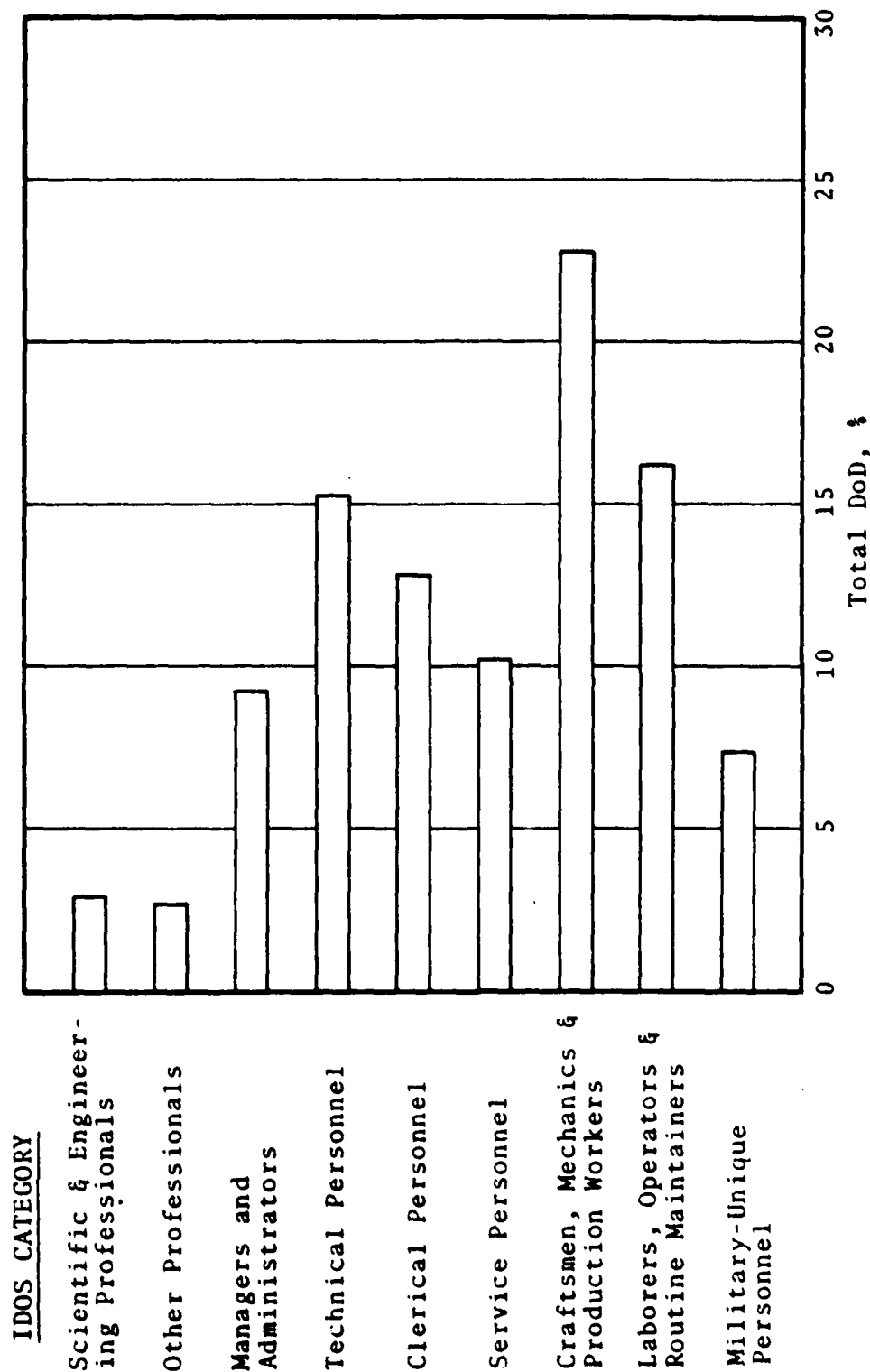


FIGURE 3.1
DoD WORK FORCE BY MAJOR OCCUPATIONAL GROUPS

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3.3 A comparison of the civilian and military work forces by MOG is contained in Figure 3.2. Both the civilian/military composition of each MOG and the overall distribution of the civilian and military work forces throughout the occupational structure are addressed below.

3.4 The civilian segment of the work force has the following occupational characteristics:

- Approximately 24% of the civilians are clerical personnel
- Over 10% are in nonmanagerial professional occupations
- Nearly 31% of the civilians are in blue-collar occupations.

The following characteristics describe the military portion of the work force:

- 11% of the military are in military-unique occupations
- About 3% are in nonmanagerial professional occupations
- Approximately 7% of the military are managers and administrators
- 43% of the military are in blue-collar occupations.

3.5 The following occupational groups have a concentration of civilian personnel: Scientific and Engineering Professionals, Managers and Administrators, and Clerical Personnel. Scientists

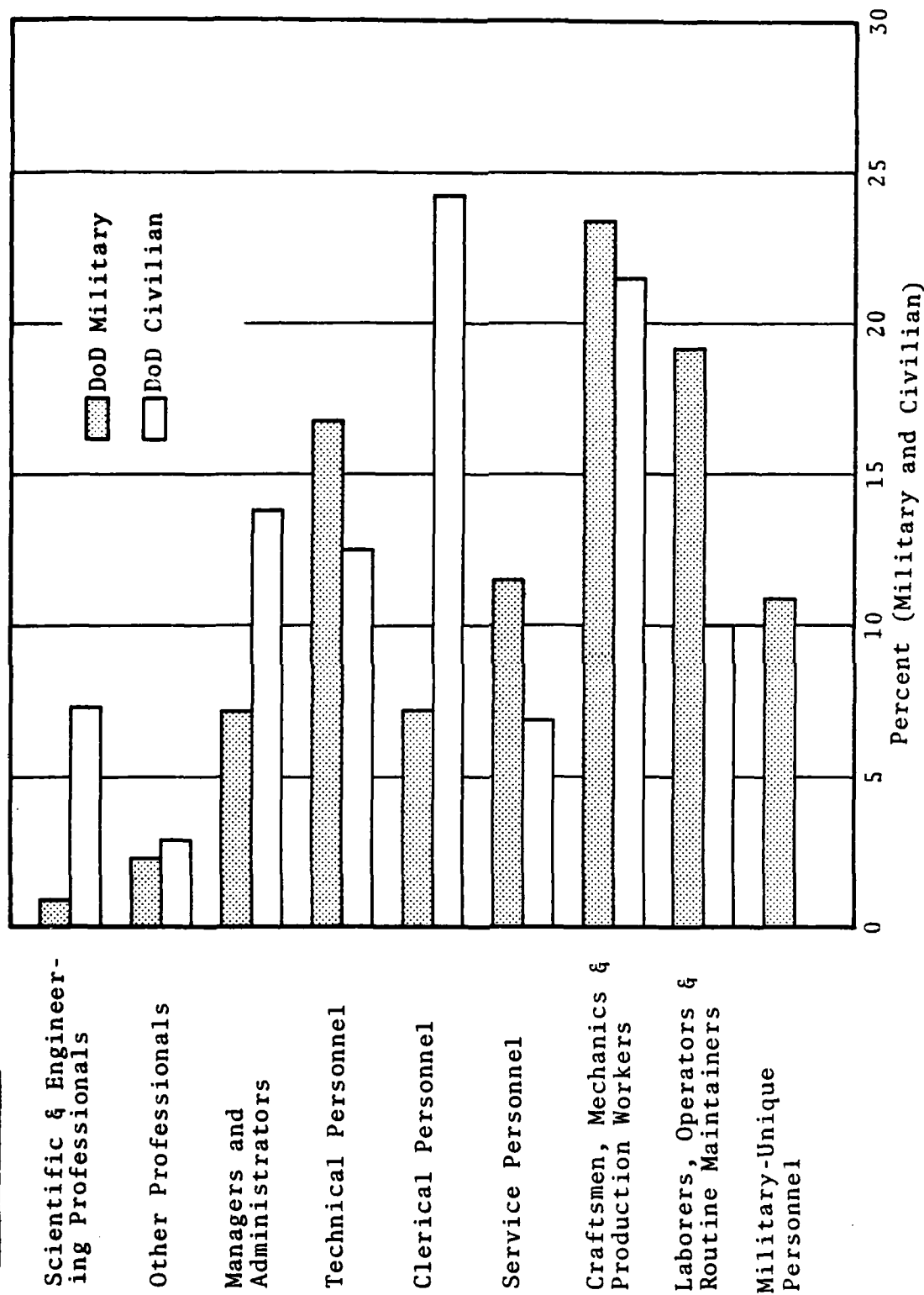
IDOS CATEGORY

FIGURE 3.2

DoD MILITARY/CIVILIAN BY MAJOR OCCUPATIONAL GROUPS

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and engineers are particularly prominent because over 81% of the total are civilian (see Figure 3.3). Four MOGs are composed of mostly military personnel. The categories of Technical Personnel, Service Personnel, Laborers, Operators, and Routine Maintainers, and, as expected, Military-Unique Personnel, have from 74% to 100% of their work force in the military segment of the work force. Only Craftsmen, Mechanics, and Production Workers and Other Professionals have percentages of civilians in proportion to the civilian percentage for the entire DoD work force (32.5%).

OFFICER/ENLISTED AND GS/WB COMPARISONS

3.6 To further describe the characteristics of the DoD work force, the officer/enlisted and GS/WB pay plan components in each MOG are displayed in Figures 3.4 and 3.5, respectively. In general, the only significant overlap of pay plans in the military is in the category of Technical Personnel. This is due to the number of warrant officers, pilots, and navigators categorized here from the officer component and from the large number of enlisted personnel categorized throughout the subcategories. In the civilian work force, both GS and WB personnel are categorized in all of the Technical Personnel subcategories and in the Service Personnel category.

3.7 From the detailed breakdown in Figure 3.4, it can be seen that officer occupations fall primarily in three areas:

- Over 53% are in management and administration
- 21% are Technical Personnel
- About 24% of the personnel are in nonmanagerial professional occupations.

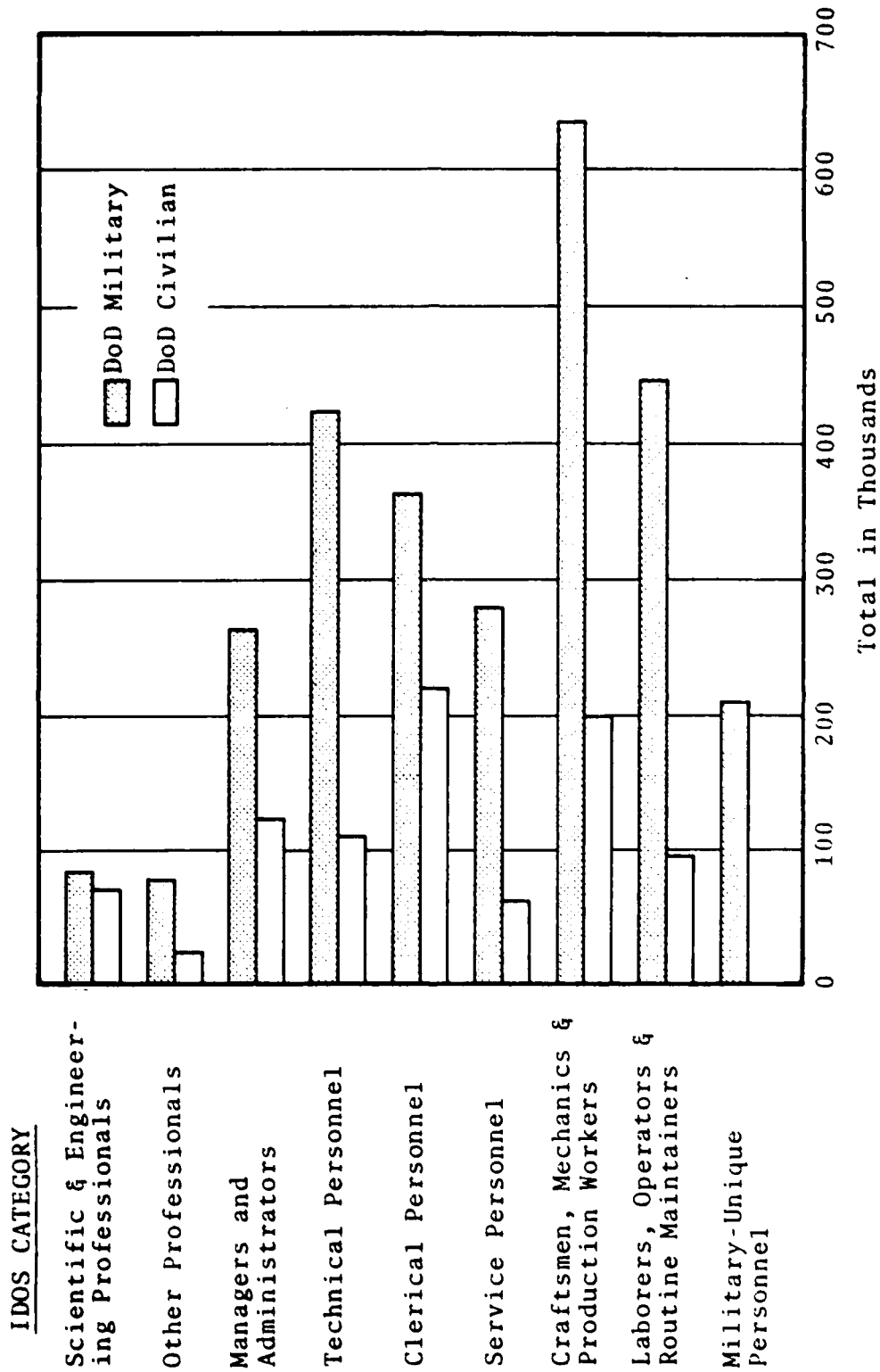


FIGURE 3.3
TOTAL DoD WORK FORCE BY MAJOR OCCUPATIONAL GROUPS

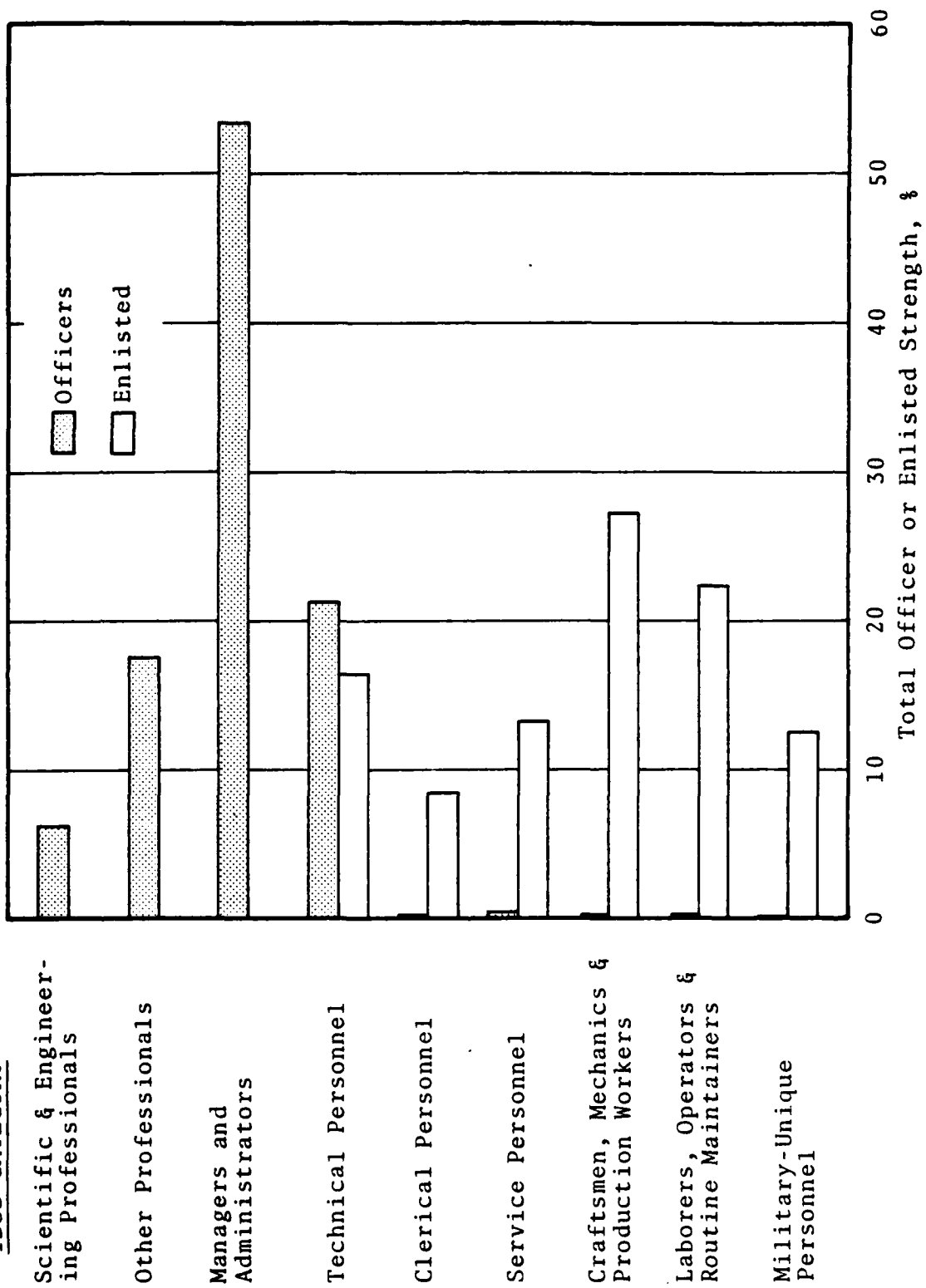
IDOS CATEGORY

FIGURE 3.4

MILITARY OFFICER/ENLISTED BY MAJOR OCCUPATIONAL GROUPS

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Enlisted personnel are distributed into a wider range of MOGs. Almost 50% of the enlisted personnel are in the blue-collar categories of Craftsmen, Mechanics, and Production Workers and Laborers, Operators, and Routine Maintainers.

3.8 In the civilian categorizations (see Figure 3.5), two characteristics are significant. First, over 90% of the WB civilians are categorized in the blue-collar categories. Second, approximately 4 out of every 10 GS workers are in the clerical area, with the rest of the personnel evenly distributed in the nonmanagerial professional, managerial, and administrative, technical, and service areas.

3.9 The civilian and military subsets of the DoD work force are summarized by occupation in Figure 3.6. This figure points out that there is not a one-to-one correspondence occupationally between the officers and GS personnel or between enlisted personnel and WB personnel. Therefore, the work force cannot be classified occupationally into four mutually exclusive subsets, as is often proposed. Also, the work force's occupations differ from group to group, so to analyze the work force, one must consider the unique characteristics of each group.

COMPARISON OF MILITARY DEPARTMENTS

3.10 Comparisons of occupational groupings in each military department are presented in Figures 3.7, 3.8, and 3.9. Since the civilians in the Marine Corps are included only in the Navy data, the aggregation of Navy and Marine Corps data into a Department of the Navy (DoN) total provides a more accurate figure for comparative purposes with the Army and Air Force.

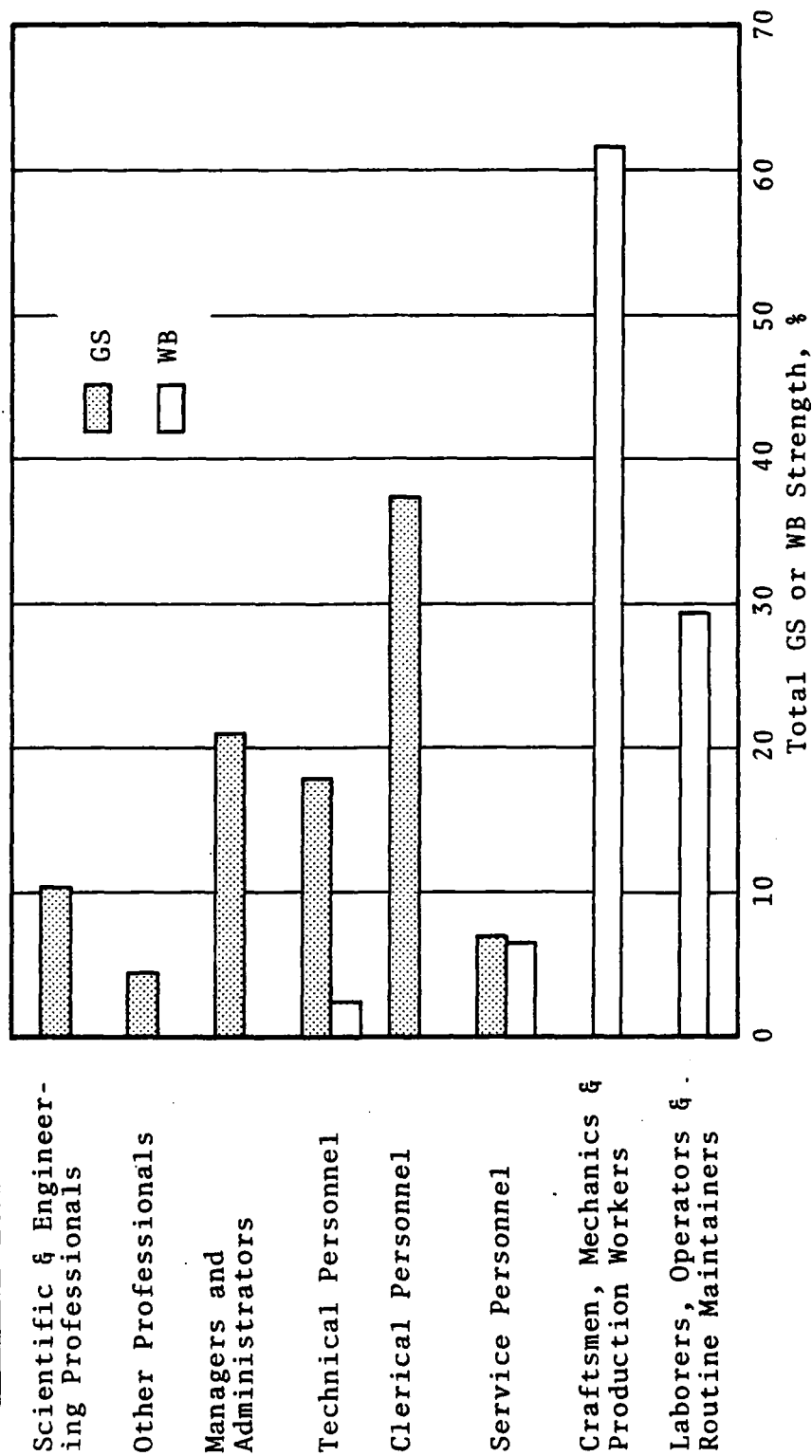
IDOS CATEGORY

FIGURE 3.5

GENERAL SCHEDULE/WAGE BOARD PERCENTAGES BY MAJOR OCCUPATIONAL GROUPS

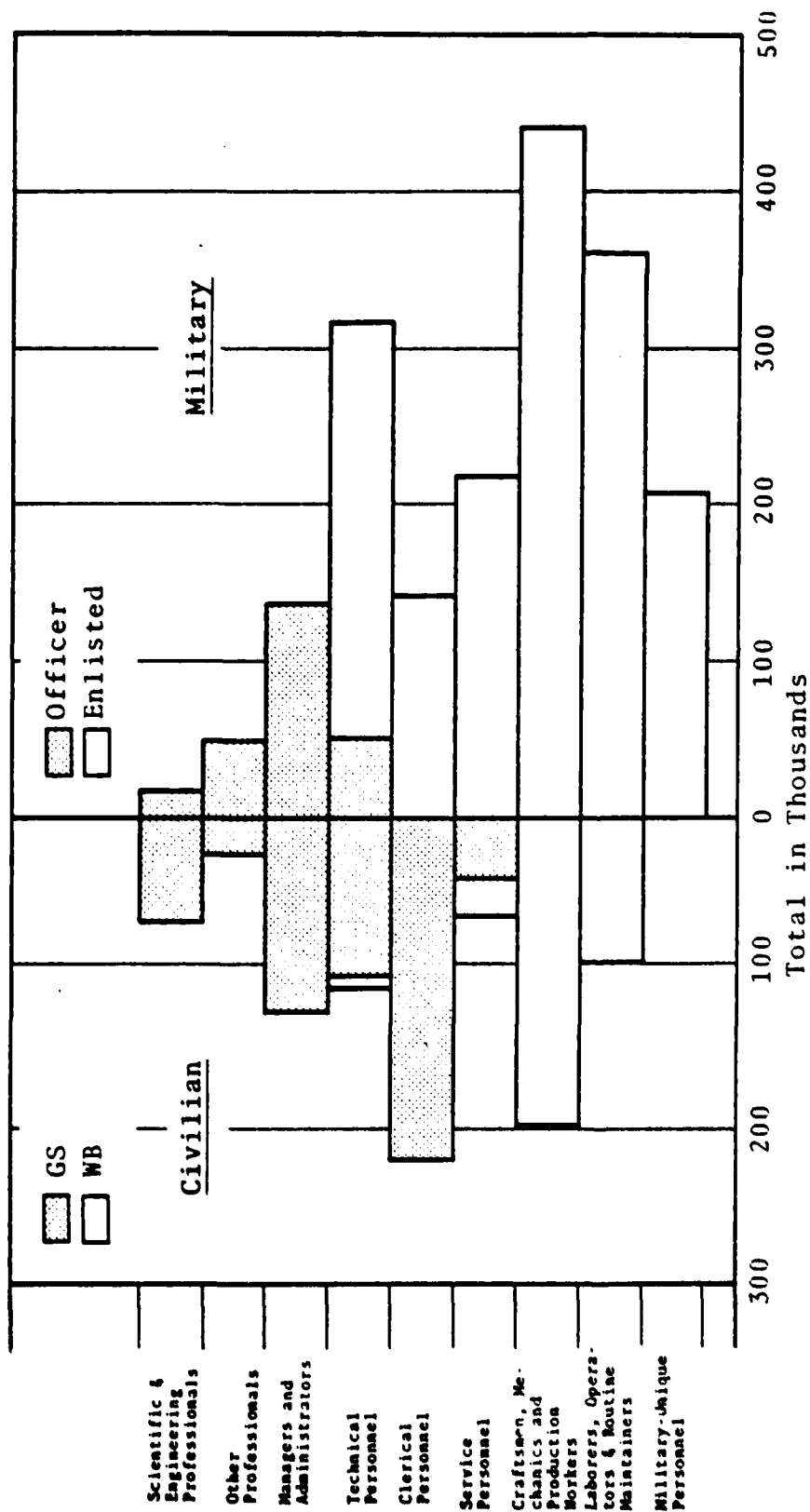


FIGURE 3.6
CIVILIAN AND MILITARY TOTALS BY MAJOR OCCUPATIONAL GROUPS

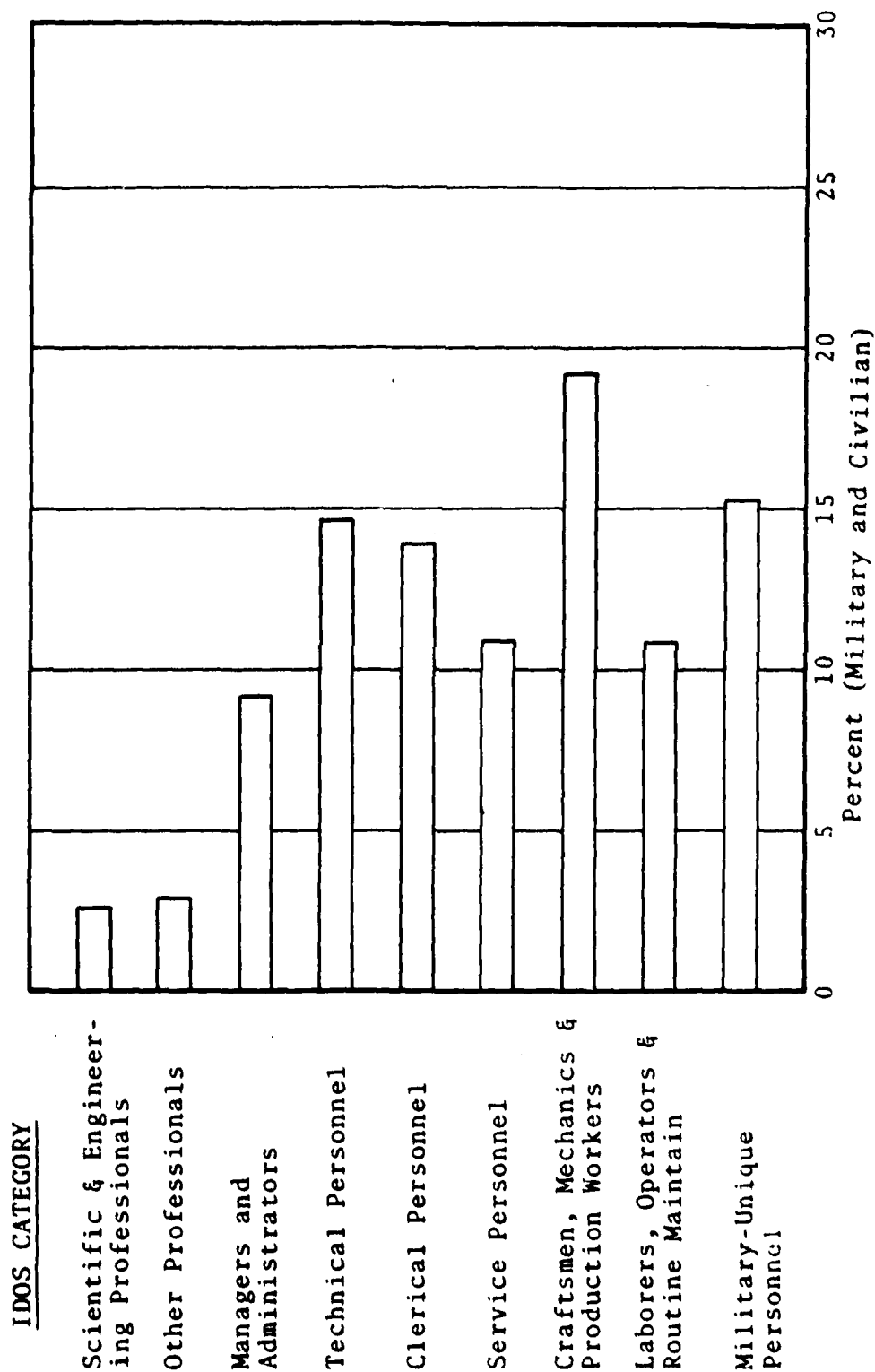


FIGURE 3.7
PERCENT OF ARMY STRENGTH BY MAJOR OCCUPATIONAL GROUPS

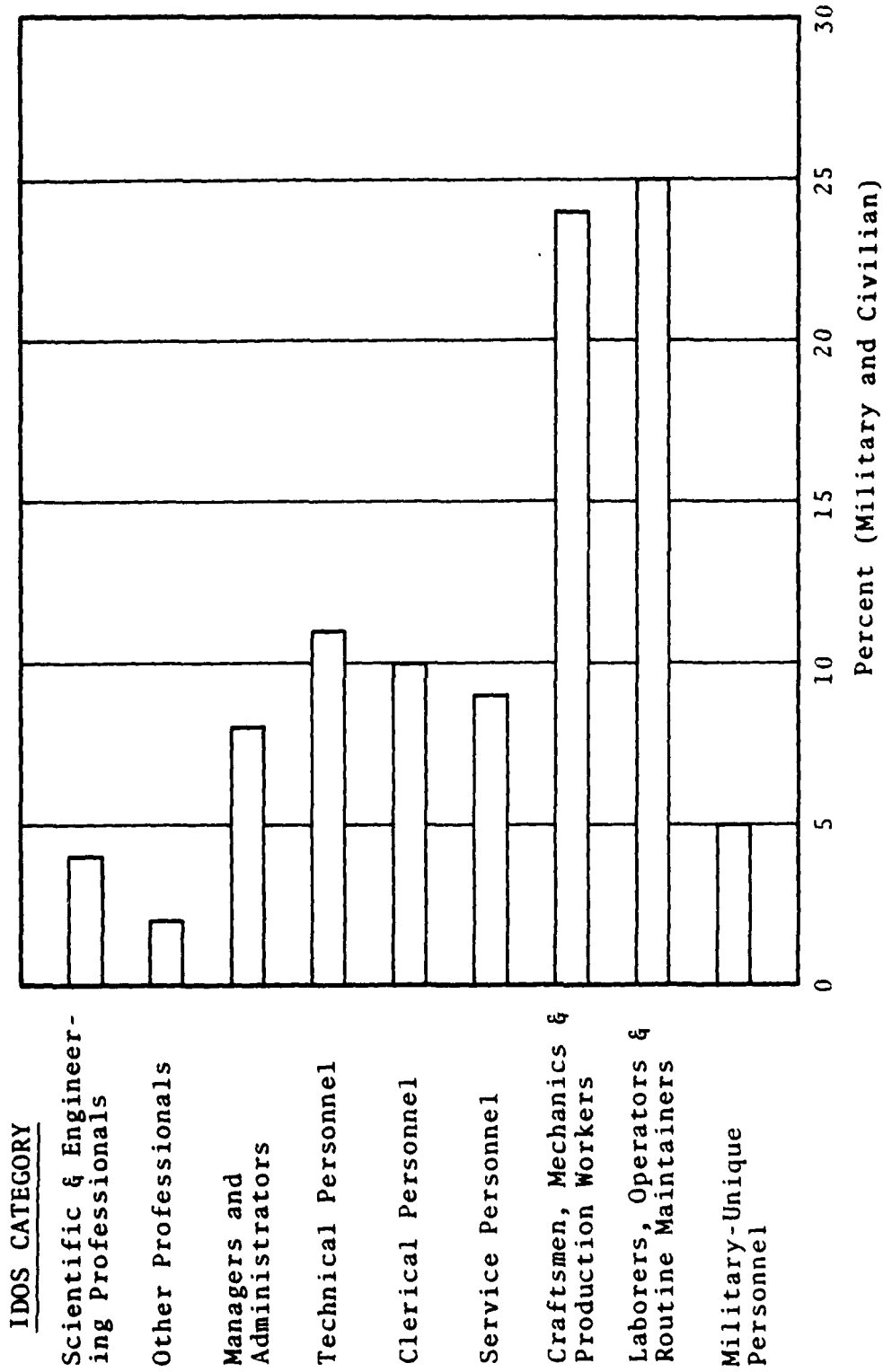


FIGURE 3.8
PERCENT OF DEPARTMENT OF THE NAVY STRENGTH BY MAJOR OCCUPATIONAL GROUPS

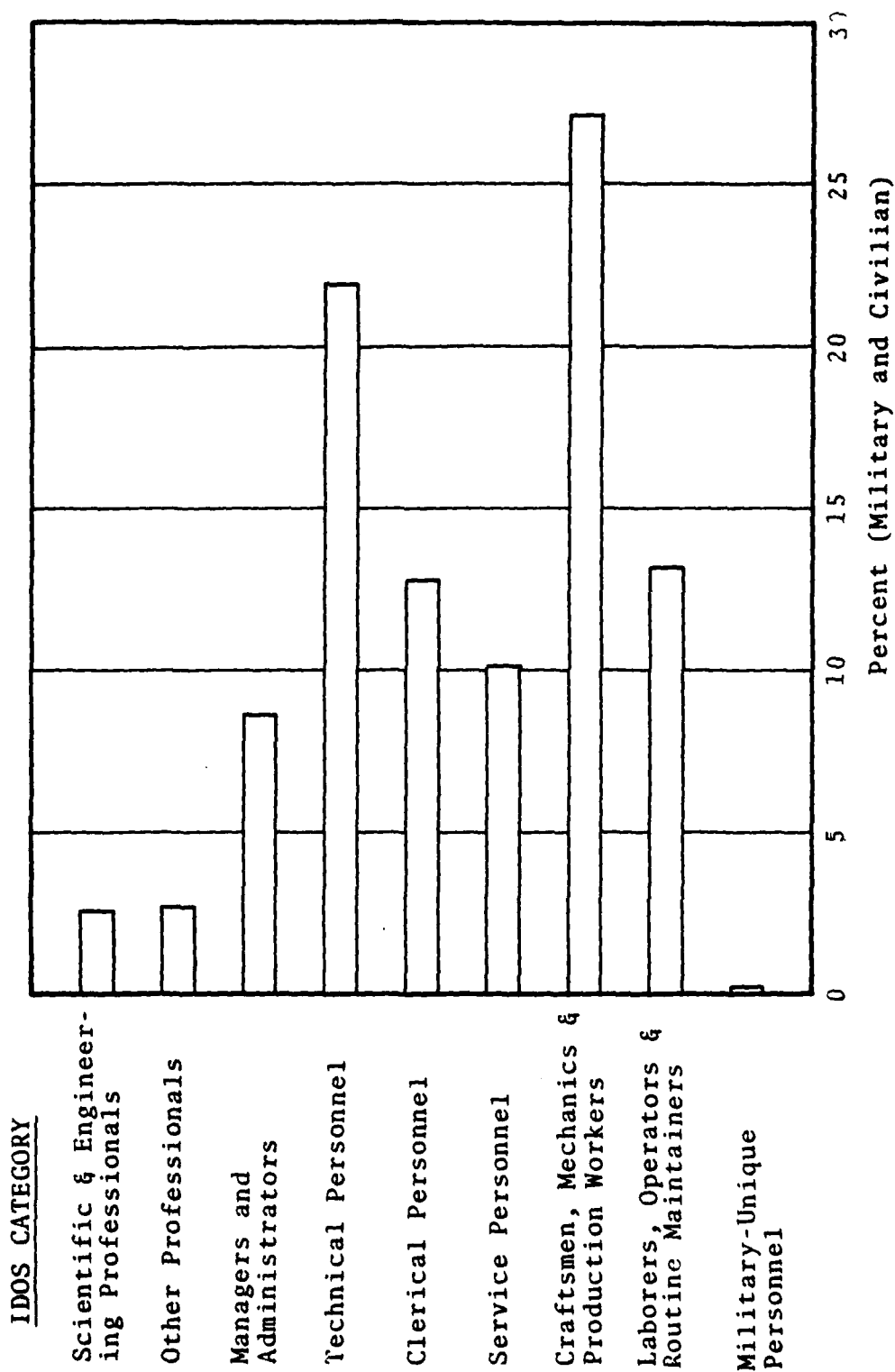


FIGURE 3.9
PERCENT OF AIR FORCE STRENGTH BY MAJOR OCCUPATIONAL GROUPS

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3.11 General work force characteristics that are consistent throughout all the department's occupational structure (as reflected by the MOGs in IDOS) are:

- Approximately 9% of the personnel in each department are managers and administrators
- 6% are employed in nonmanagerial professional capacities
- 60% to 65% of each department are categorized as Technical Personnel, Craftsmen, Mechanics, and Production Workers, and Laborers, Operators, and Routine Maintainers.

COMPARISON BY MAJOR OCCUPATIONAL GROUP (MOG)

3.12 The next level of detail in this description is the breakdown of the MOGs of each military department into its military and civilian components. The occupational groups that illustrate significant differences between departments will be discussed in terms of total personnel or of military/civilian composition.

3.13 In the MOG Scientific and Engineering Personnel (Figures 3.10 and 3.11), two departments are prominent because of unique work-force characteristics. The DoN has a significantly higher percentage of scientists and engineers than the Air Force and Army. The Air Force differs in this MOG in another way. Within the category of Scientific and Engineering Professionals, the Air Force has over four times the number of military engineers and scientists, relative to its entire MOG total, than the other departments.

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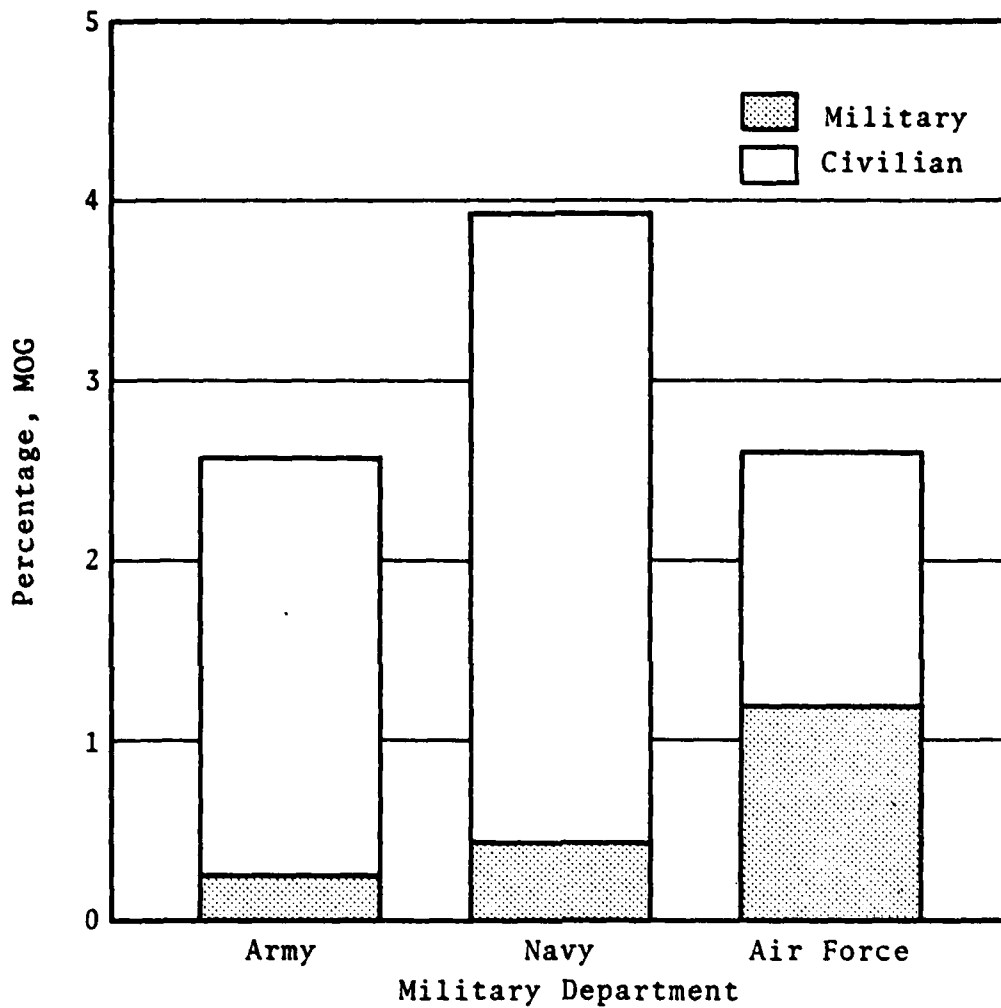


FIGURE 3.10
PERCENT OF MILITARY DEPARTMENT STRENGTH IN
MAJOR OCCUPATIONAL GROUP, SCIENTIFIC
AND ENGINEERING PROFESSIONALS

PRESEARCH INCORPORATED

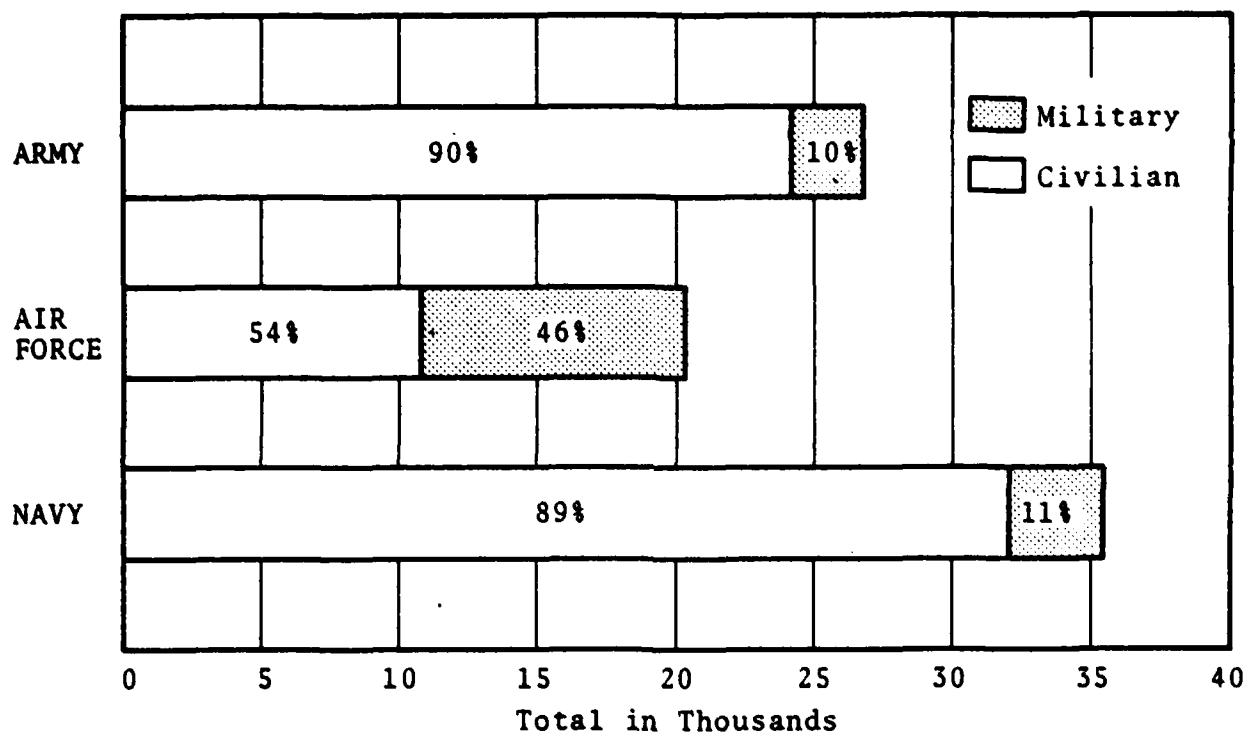


FIGURE 3.11
TOTAL MILITARY DEPARTMENT STRENGTHS IN MAJOR
OCCUPATIONAL GROUP, SCIENTIFIC AND
ENGINEERING PROFESSIONALS

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3.14 The Air Force has a large number of aircraft crew members in its officer ranks. Air crew members are categorized in the MOG Technical Personnel. Thus the Air Force is significantly different than the Department of the Navy and Department of the Army in this MOG. Almost 22% of the Air Force work force is categorized here, with 83% of it being military. Both the Army and Navy are lower with respect to both percentages (Figures 3.12 and 3.13).

3.15 The Department of the Army differs from the Navy and Air Force in the clerical and craftsmen, mechanics and production workers areas. Although all the departments use approximately the same overall percentage of clerical workers in their work force, the Army employs 12 to 14% more civilians relative to its size than the other departments (Figures 3.14 and 3.15). Since the Air Force and Navy are equipment intensive and the Army labor intensive, a relatively larger number of mechanics are categorized in the craftsmen, mechanics and production workers category for the Air Force and Navy. They both have 6% more personnel relative to their size than the Army (Figures 3.16 and 3.17).

3.16 The Army and Air Force identify the occupations of their apprentices much earlier in the service person's career than the Navy and thus have a more discrete description of the occupational structure of their departments. This large number of general laborers in the Navy resulted in 25% of the DoN work force being categorized as laborers, operators and routine maintainers (Figures 3.18 and 3.19). Both the Army and Air Force have much fewer people here.

3.17 In the category of military-unique personnel (Figure 3.20 and 3.21), only the Department of the Army (15%) and the

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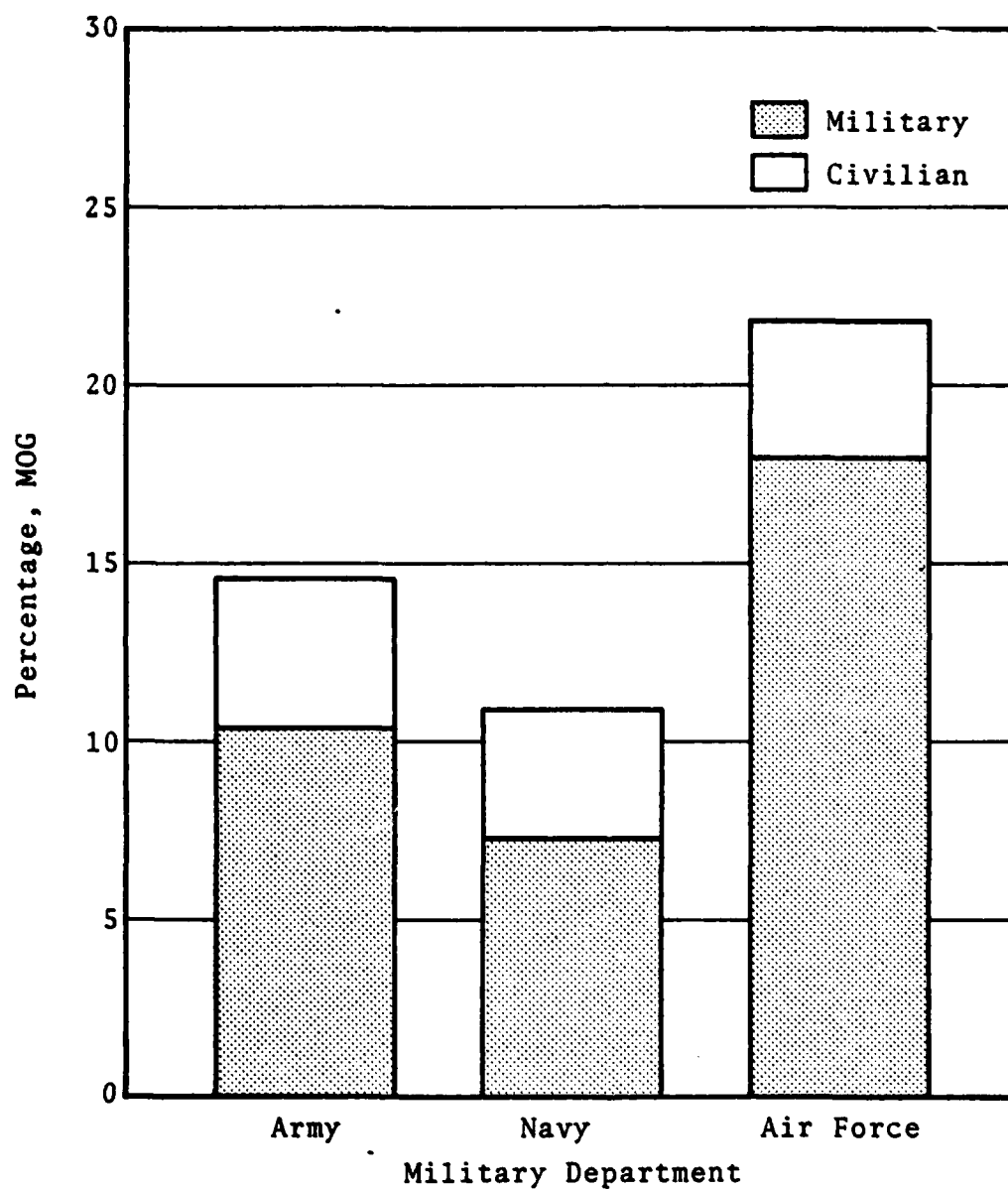


FIGURE 3.12
PERCENT OF MILITARY DEPARTMENT STRENGTH IN
MAJOR OCCUPATIONAL GROUP,
TECHNICAL PERSONNEL

PRESEARCH INCORPORATED

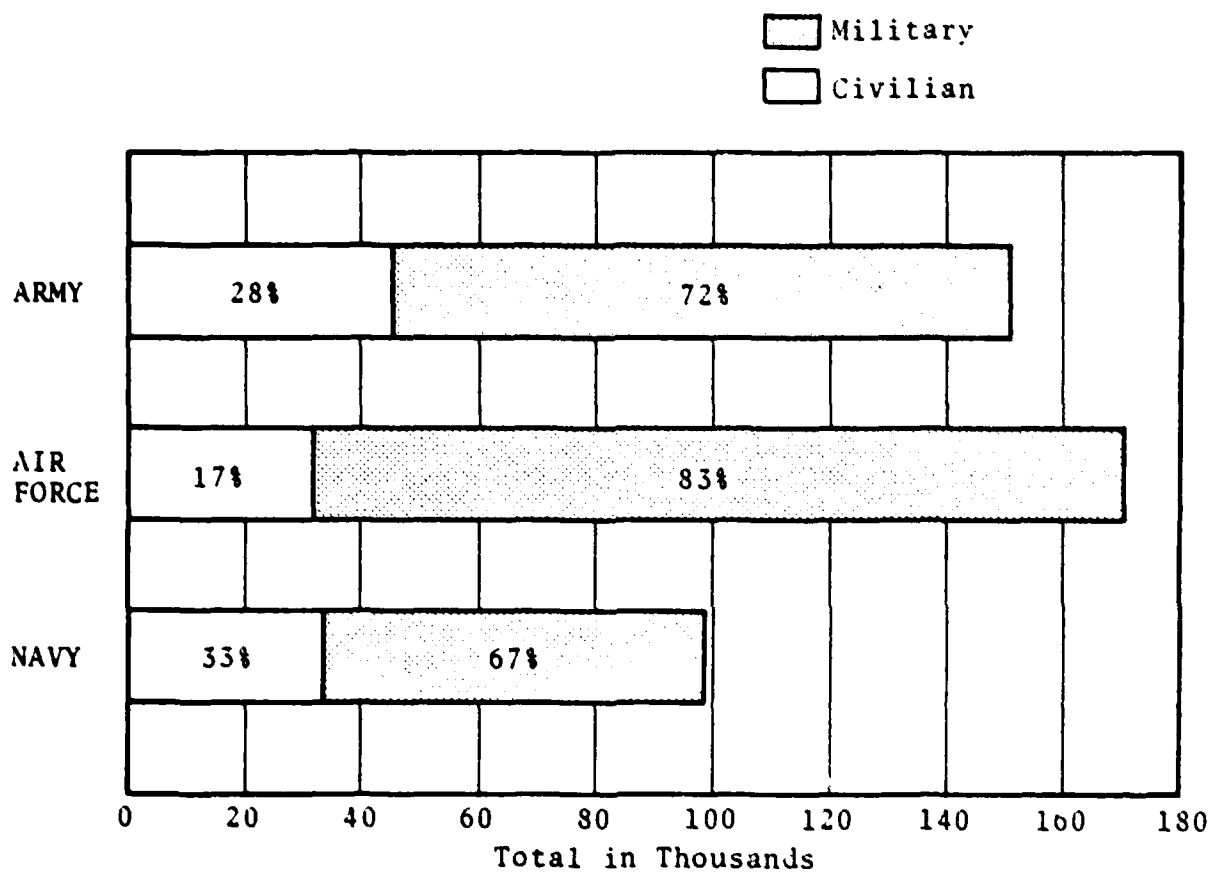


FIGURE 3.13
TOTAL MILITARY DEPARTMENT STRENGTHS
IN MAJOR OCCUPATIONAL GROUP,
TECHNICAL PERSONNEL

PRESEARCH INCORPORATED

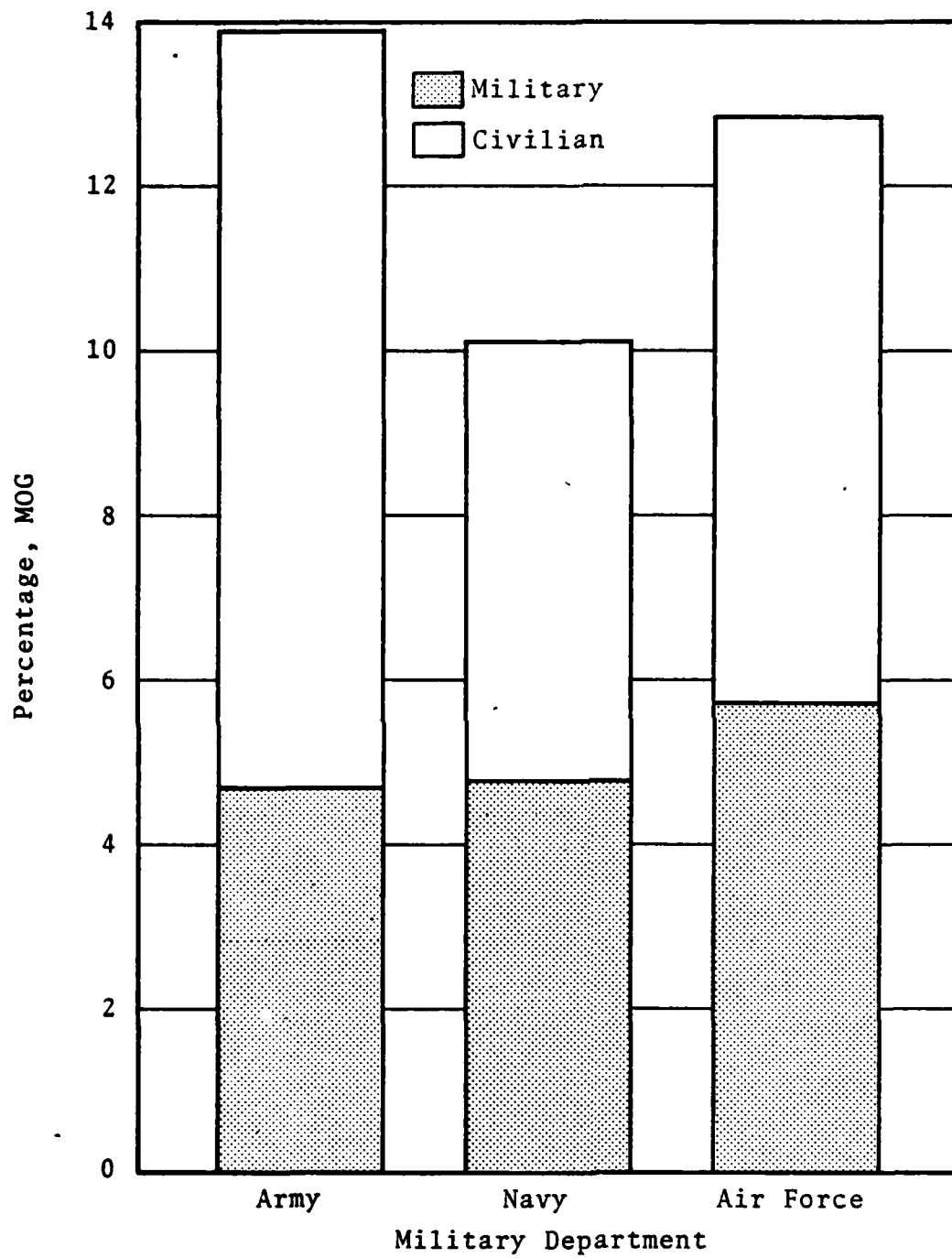


FIGURE 3.14
PERCENT OF MILITARY DEPARTMENT STRENGTH IN
MAJOR OCCUPATIONAL GROUP,
CLERICAL PERSONNEL

PRESEARCH INCORPORATED

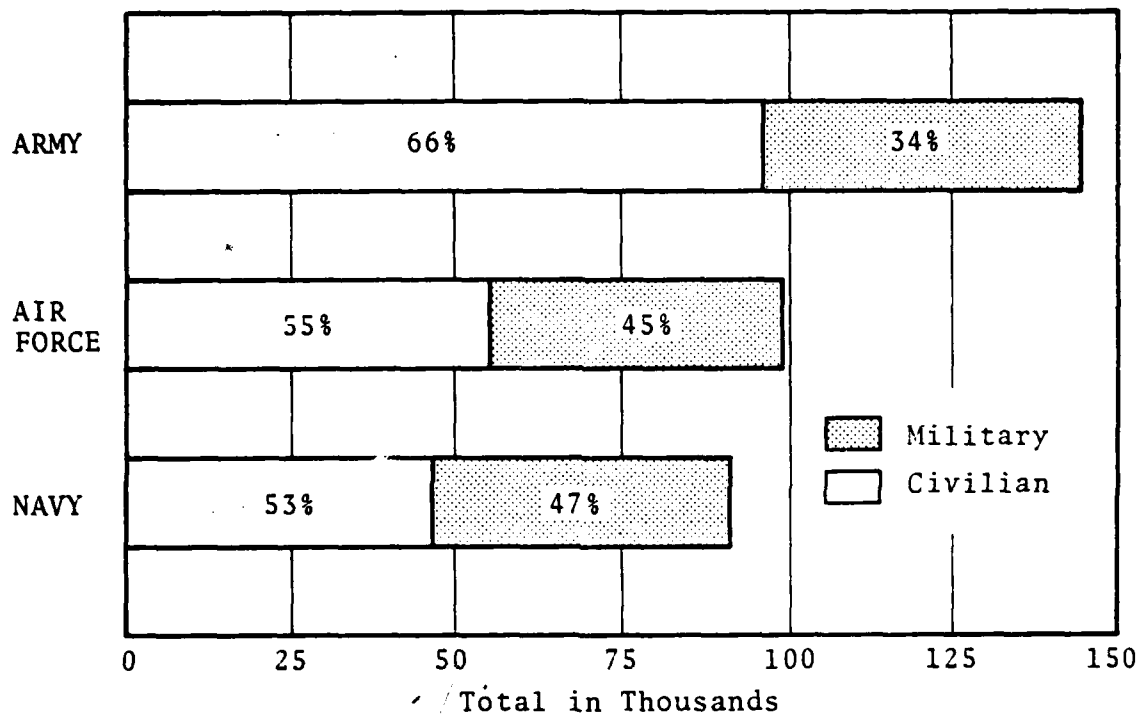


FIGURE 3.15
TOTAL MILITARY DEPARTMENT STRENGTHS
IN MAJOR OCCUPATIONAL GROUP,
CLERICAL PERSONNEL

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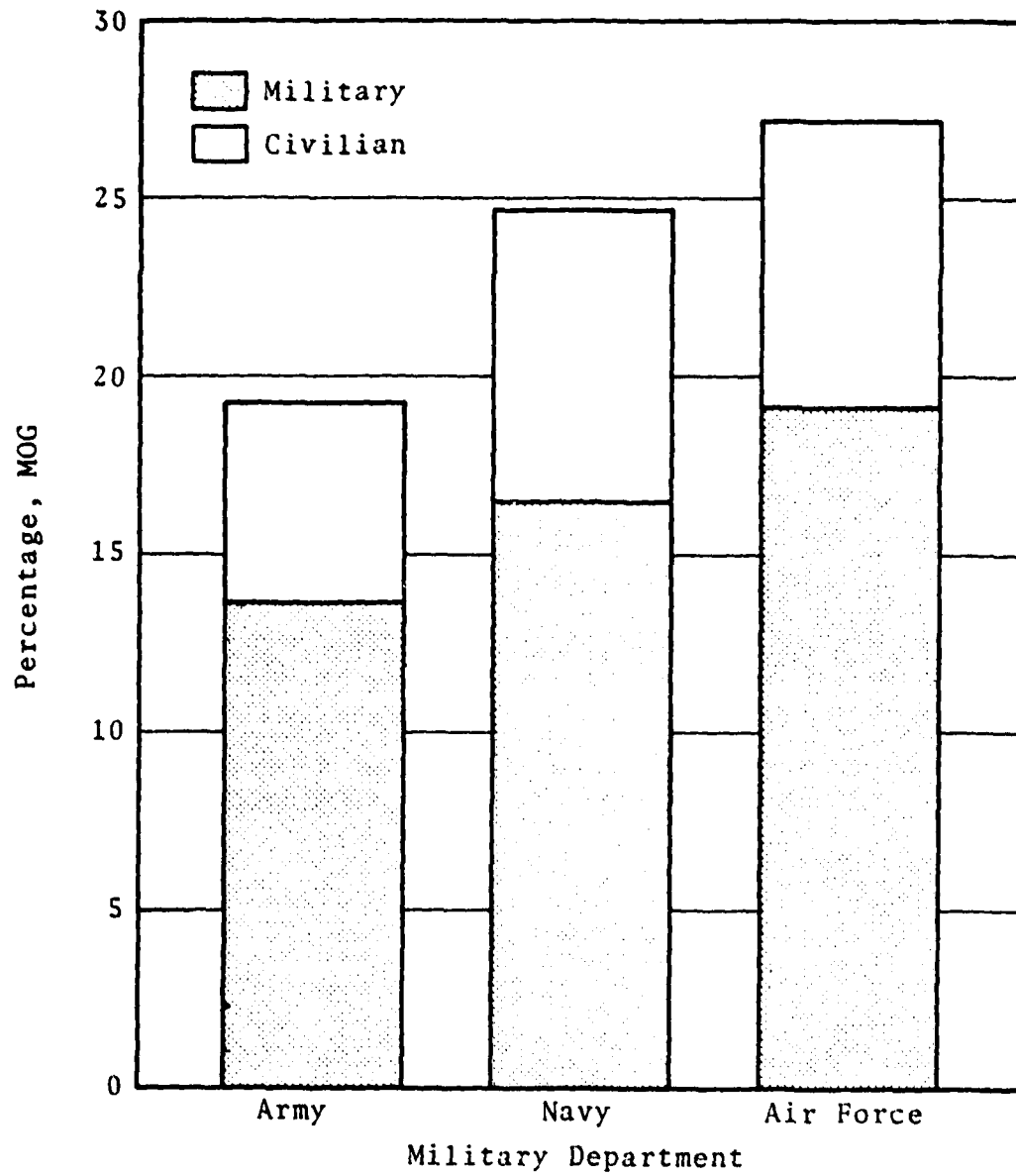


FIGURE 3.16
PERCENT OF MILITARY DEPARTMENT STRENGTH IN
MAJOR OCCUPATIONAL GROUP, CRAFTSMEN,
MECHANICS AND PRODUCTION WORKERS

PRESEARCH INCORPORATED

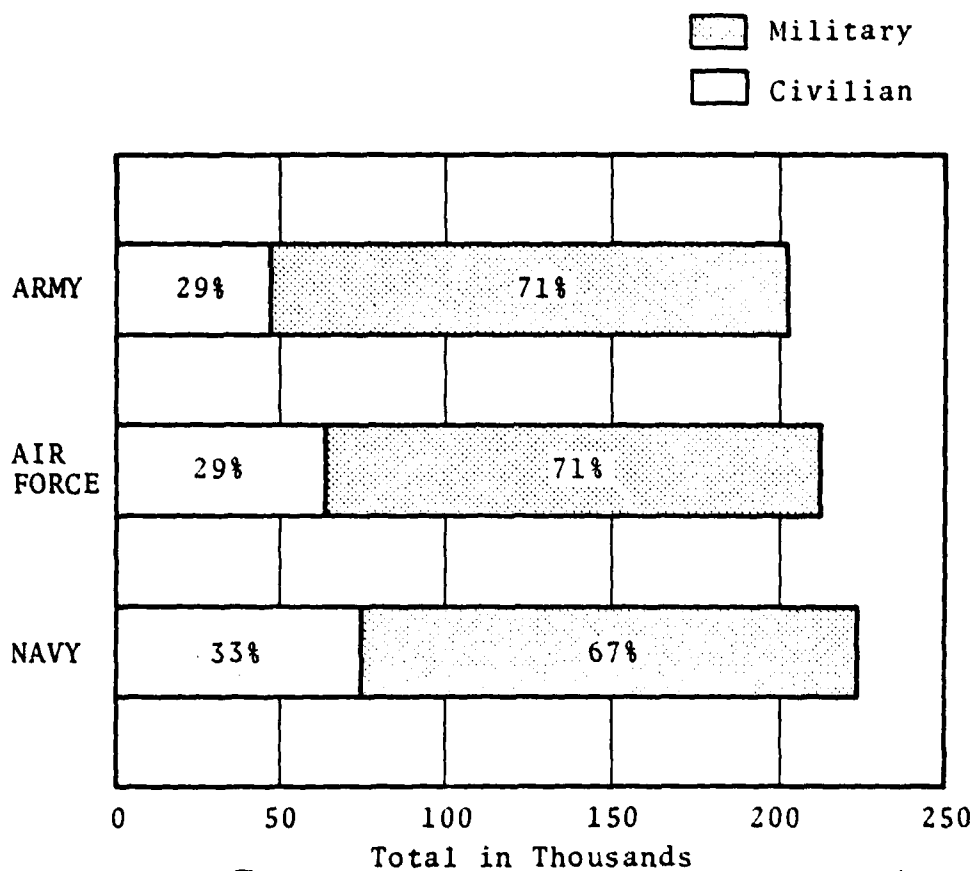


FIGURE 3.17
TOTAL MILITARY DEPARTMENT STRENGTHS IN MAJOR
OCCUPATIONAL GROUP, CRAFTSMEN, MECHANICS
AND PRODUCTION WORKERS

PRESEARCH INCORPORATED

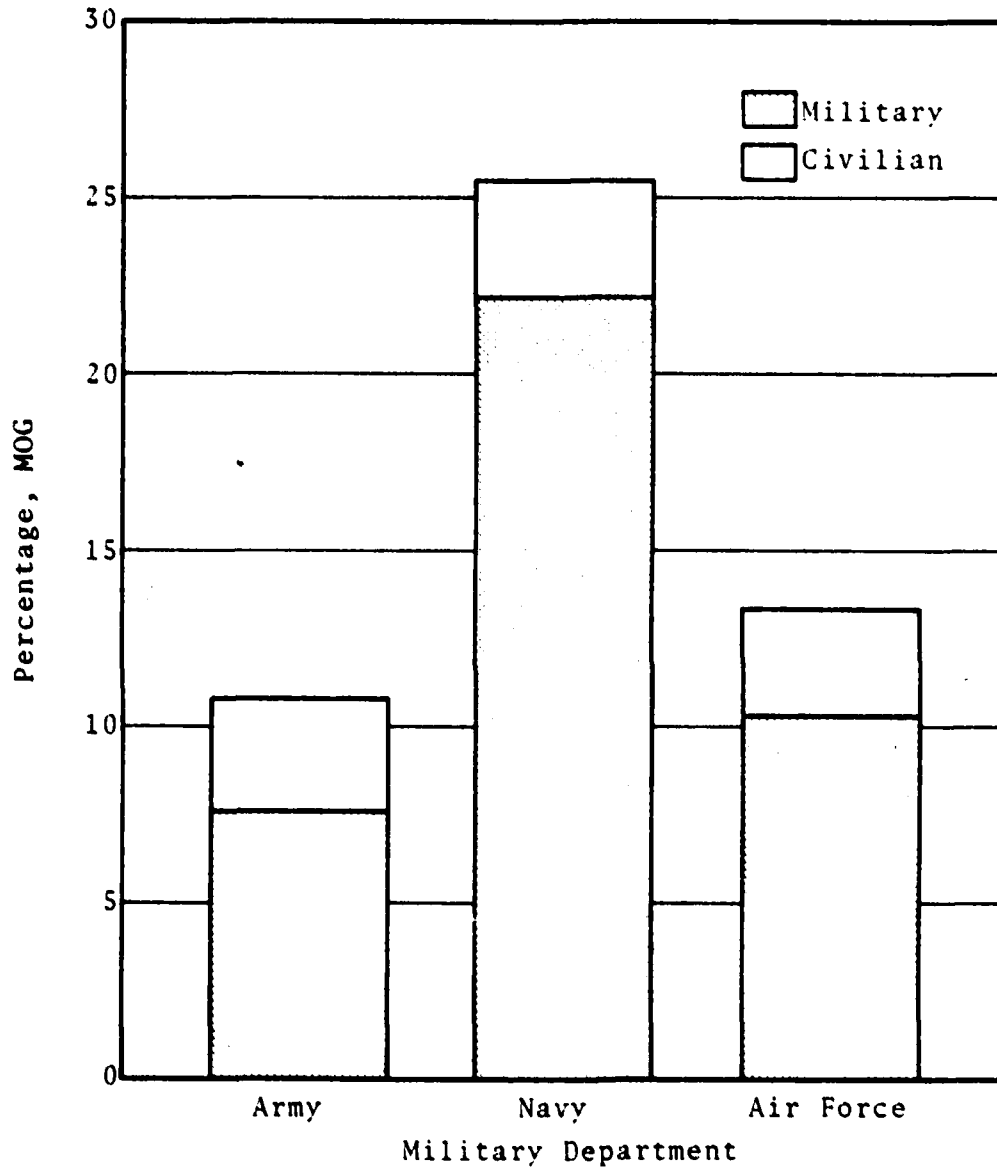


FIGURE 3.18
PERCENT OF MILITARY DEPARTMENT STRENGTH IN
MAJOR OCCUPATIONAL GROUP, LABORERS,
OPERATORS AND ROUTINE MAINTAINERS

PRESEARCH INCORPORATED

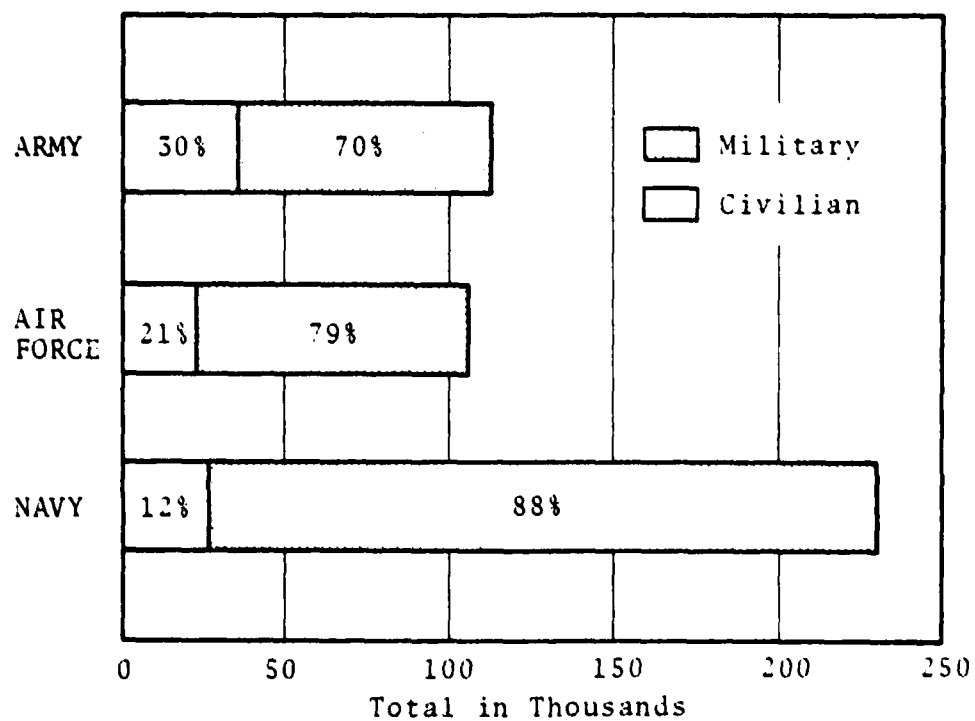


FIGURE 3.19
TOTAL MILITARY DEPARTMENT STRENGTHS
IN MAJOR OCCUPATIONAL GROUP,
LABORERS, OPERATORS AND
ROUTINE MAINTAINERS

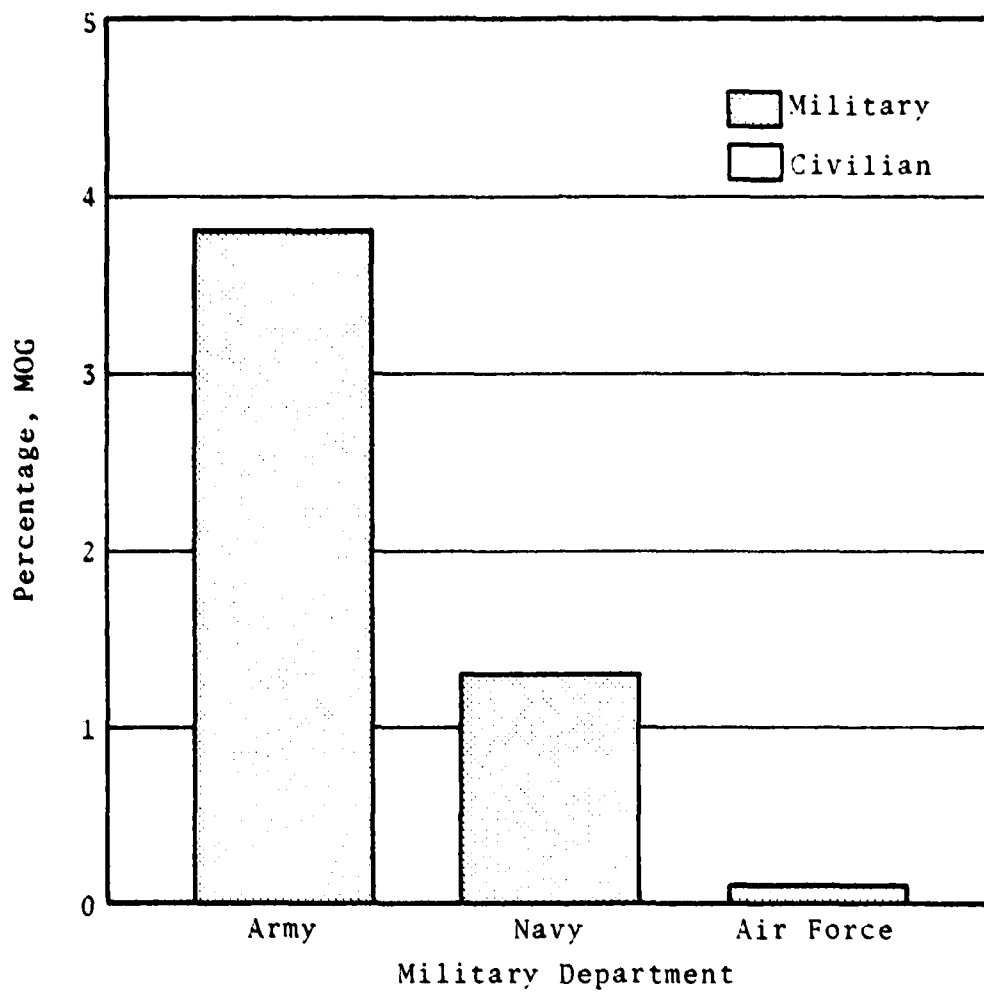


FIGURE 3.20
PERCENT OF MILITARY DEPARTMENT STRENGTH IN
MAJOR OCCUPATIONAL GROUP,
MILITARY-UNIQUE PERSONNEL

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Department of the Navy (5%) have significant amounts of personnel. The Navy's total is predominantly due to the Marine Corps' combat personnel.

IV. SUMMARY AND RECOMMENDATIONS

4.1 This section summarizes the major characteristics of the DoD work force and offers recommendations covering possible future enhancements and utilizations of the Integrated Defense Occupational Stratification system.

DoD WORK-FORCE SUMMARY

4.2 The DoD work force has a very diverse nature. It varies occupationally both among the military departments and between the DoD and the U.S. work force. To understand the occupational nature of the DoD work force, one must consider both the occupational mix within each military department and within the military and civilian segments of each department.

4.3 Comparisons of the U.S. and DoD work force reveal several noteworthy facts. First, the DoD work force is approximately the same as the U.S. work force in terms of relative occupational makeup. Also, 17% of both work forces are neither white-collar nor blue-collar. Second, in the entire DoD work force less than 1 out of 10 employees is in a strictly military-unique occupation. Therefore 90% of the defense work force have occupations which are comparable to ones outside DoD.

4.4 A very significant feature of the DoD work force surfaces during the consideration of DoD occupations across all pay plans. Each pay plan is not made up of a set of mutually exclusive occupations as is commonly believed. The officer,

enlisted, GS and Wage Board work forces all have technical personnel and there are several personnel in all of the segments except officers. Therefore changes in the requirements for employees in a particular occupational field may impact upon several areas in the work force.

4.5 Within the military departments a number of salient features in terms of major occupational groups stand out. These features reflect the unique occupational mixes each department uses to fulfill its role in the overall defense plan.

4.6 The Navy widely differs from the other departments in two occupational groupings. First, the Navy employs a much greater percentage of engineers and scientists, relative to its work-force size, than the other departments. Second, the Navy has a large pool of general labor enlisted personnel. This results in almost a quarter of its work force being categorized as laborers, operators and routine maintainers. Manpower is therefore concentrated at both the highly technical end of the occupational spectrum and at the general labor end.

4.7 The Air Force's occupational mix is significantly different than the Navy and Army in terms of percentages of military personnel in the engineer, scientist and technical personnel areas. Almost four times more military personnel are employed by the Air Force in these highly skilled areas.

4.8 The Department of the Army differs from the other departments in both the white-collar and blue-collar areas. In the white-collar portion of the work force, a much larger percentage of civilians are employed by the Army in the clerical area than either the Navy or Air Force. Relatively fewer craftsmen, mechanics and production workers are employees of the Army in the blue-collar occupations.

IDOS SUMMARY

4.9 Identification of the occupational categorizations and the description of the DoD work force illustrates both the utility and significance of the IDOS system as a useful management tool. The 10 relatively distinct and separate categories provide a basis for comparison on a DoD-wide scale since the personnel are categorized into groups detailed enough to meaningfully define segments of the work force, but broad enough to summarize data on a universal basis. IDOS is a tool most effectively utilized in areas of top-level management where the knowledge of the occupations of a work force is both meaningful and useful.

FURTHER APPLICATIONS OF IDOS

4.10 IDOS provides top-level DoD management with the ability to understand and describe the occupational nature of the DoD work force. The use of IDOS could be extended into the following manpower management areas:

- To further analyze the similarities among the military departments' occupational content through the use of the occupational functional subgroups (OFSGs) in IDOS
- As an addition to the DMDC-maintained personnel data base. The active military, reserve/guard components and civilians of DoD can be displayed on a single sector of occupations for management information reporting.

- To monitor the labor force implications of reductions or additions to force strengths. The knowledge of the types of occupations affected by shifts could prevent a shortage or abundance of occupations in specified areas.

4.11 A number of management areas are not well described or analyzed with IDOS:

- Making specific civilian substitutions (job specifics are necessary to do this)
- Consolidating military training courses (occupational specifics must be considered)
- Justifying military/civilian mixes
- Describing the combat and support areas (combat and support refers to types of units all of which contain a mix of occupations)
- Describing the functions performed by defense personnel.

APPENDIX A
IDOS MAJOR OCCUPATIONAL GROUPS

Scientific and Engineering Professionals

Includes all officers and civilians with scientific, engineering or architectural backgrounds trained to engage in research, design or development. This generally requires at least a bachelor's degree in engineering or science, or appropriate experience in the field.

Other Professionals

Encompasses all officers and civilians trained in the mathematics, medical, law, education and intelligence fields. These occupations require a college degree or an equivalent level of experience in the professional field.

Managers and Administrators

Contains the officers and civilians trained as policy-makers, organizers or managers. The professionals qualified to provide direct support to management in administrative areas such as accounting or data systems analysis are also included.

Technical Personnel

Encompasses specialists qualified in technical areas which require extensive special training. This includes supporting professional, aviation and computer operations.

Clerical Personnel

Includes all personnel trained to provide the typing, stenography, office equipment operation and filing in support office operations.

Service Personnel

Contains all personnel qualified to provide security, fire protection, medical domestic services and personal services. Each subgroup encompasses supervisors, chiefs and superintendents.

Craftsmen, Mechanics and Production Workers

Includes personnel with the capability to install, maintain, repair or fabricate material and equipment. The maintenance personnel have at least intermediate-level support capabilities. Each subgroup contains supervisors, chiefs and superintendents.

Laborers, Operators and Routine Maintainers

Encompasses all personnel trained to provide equipment operation, labor and routine maintenance in the transportation, supply and installation support areas. This includes supervisors, chiefs and superintendents.

Military-Unique Personnel

Includes all military personnel trained in occupations with no civilian equivalent, e.g., infantrymen, artillerymen or torpedomen.

Other Personnel

Encompasses all personnel qualified in occupations that cannot be classified into any other major occupational group. This includes students, patients, and personnel on special assignments that are not defined in the Services' occupational systems.

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APPENDIX B
ADDITIONAL OCCUPATIONAL COMPARISONS

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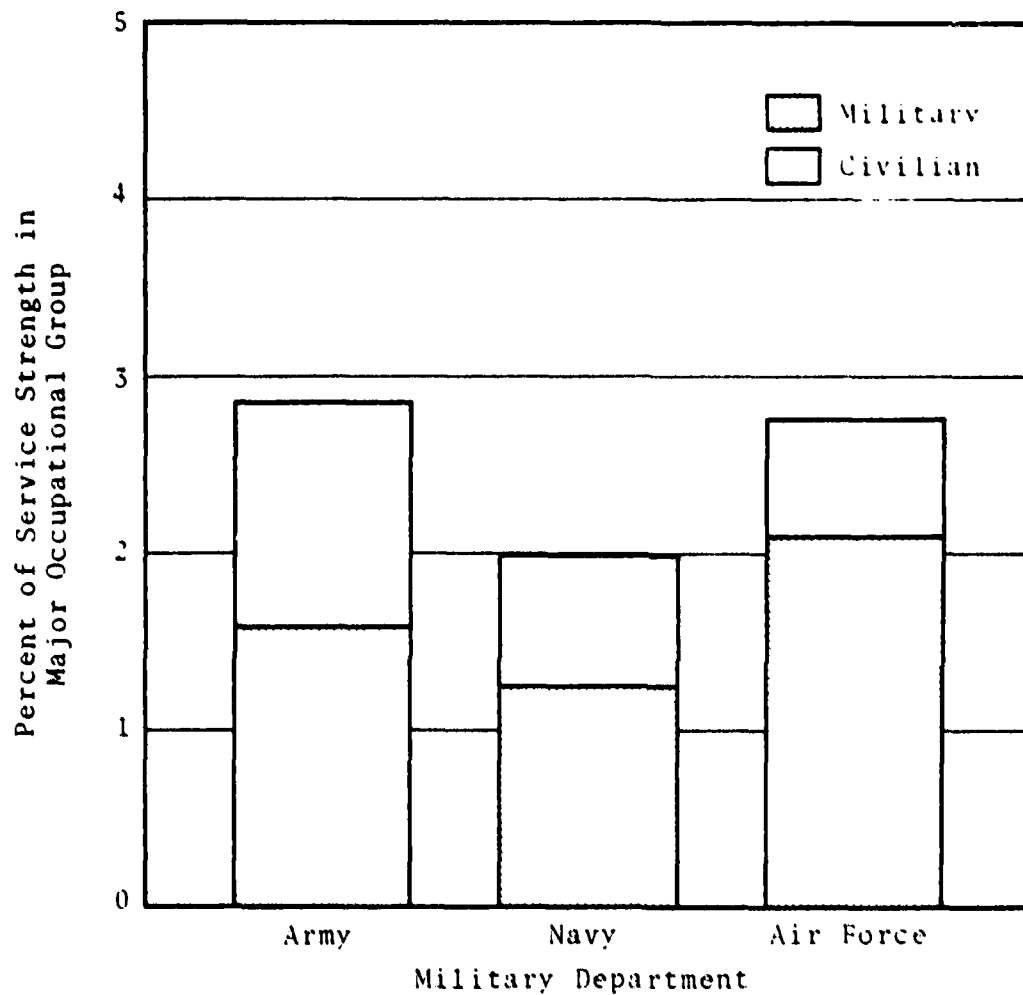


FIGURE B.1
PERCENT OF MILITARY DEPARTMENT STRENGTH IN
MAJOR OCCUPATIONAL GROUP,
OTHER PROFESSIONALS

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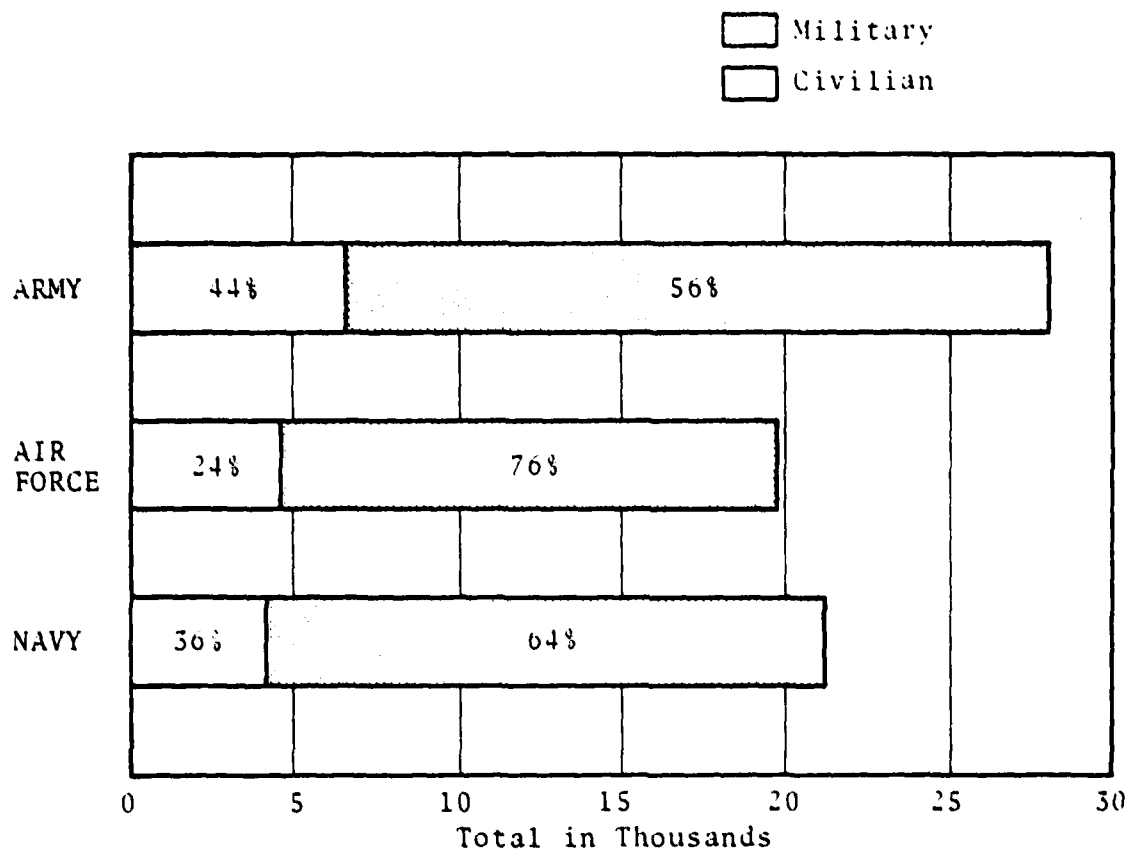


FIGURE B.2
TOTAL MILITARY DEPARTMENT STRENGTHS
IN MAJOR OCCUPATIONAL GROUP,
OTHER PROFESSIONALS

PRESEARCH INCORPORATED

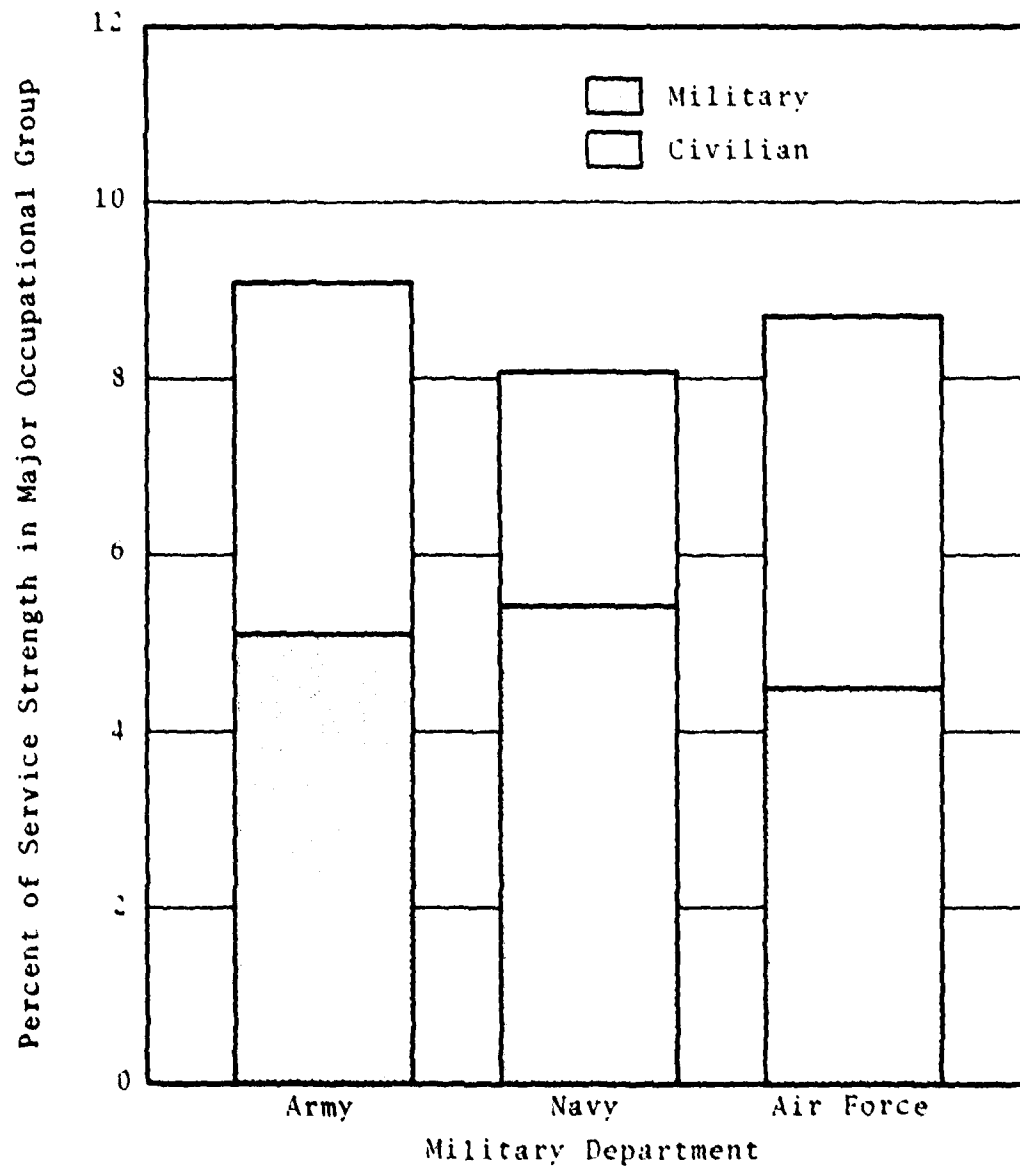


FIGURE B.3
PERCENT OF MILITARY DEPARTMENT STRENGTH IN
MAJOR OCCUPATIONAL GROUP,
MANAGERS AND ADMINISTRATORS

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■ Military
□ Civilian

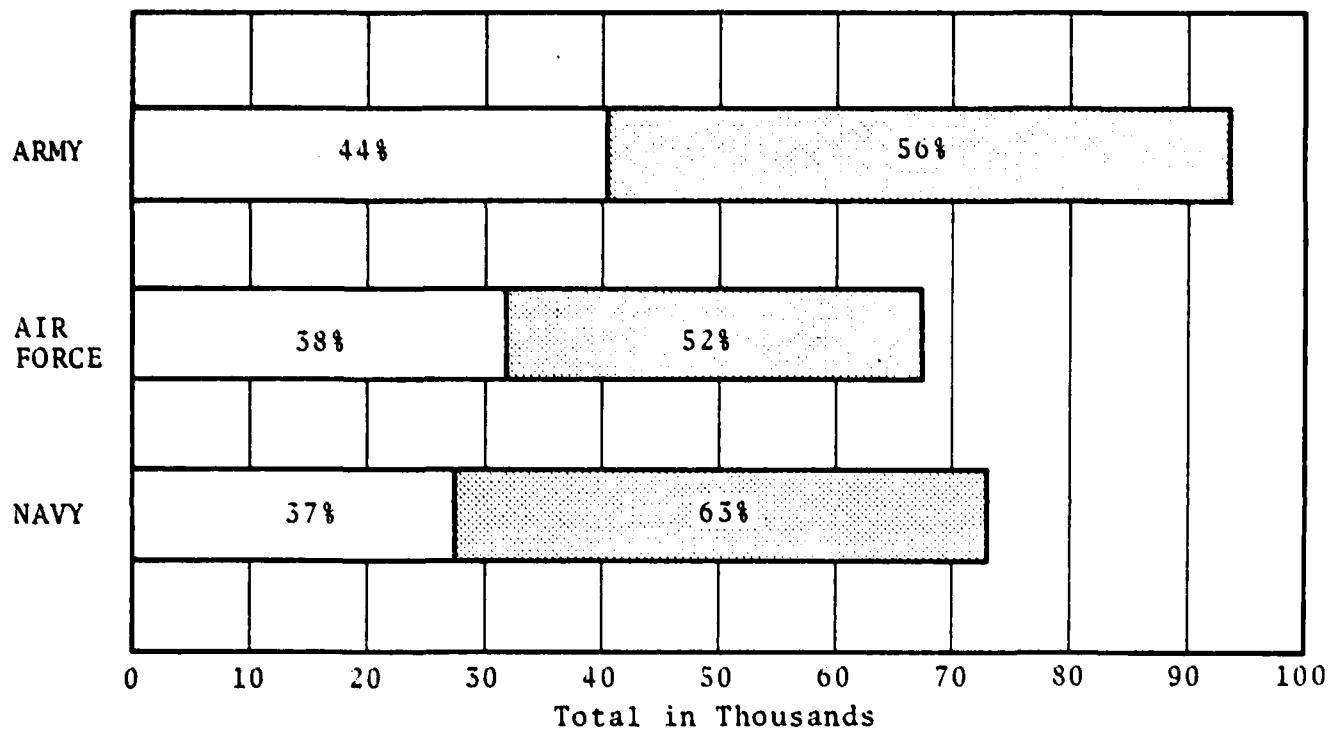


FIGURE B.4
TOTAL MILITARY DEPARTMENT STRENGTHS
IN MAJOR OCCUPATIONAL GROUP.
MANAGERS AND ADMINISTRATORS

PRESEARCH INCORPORATED

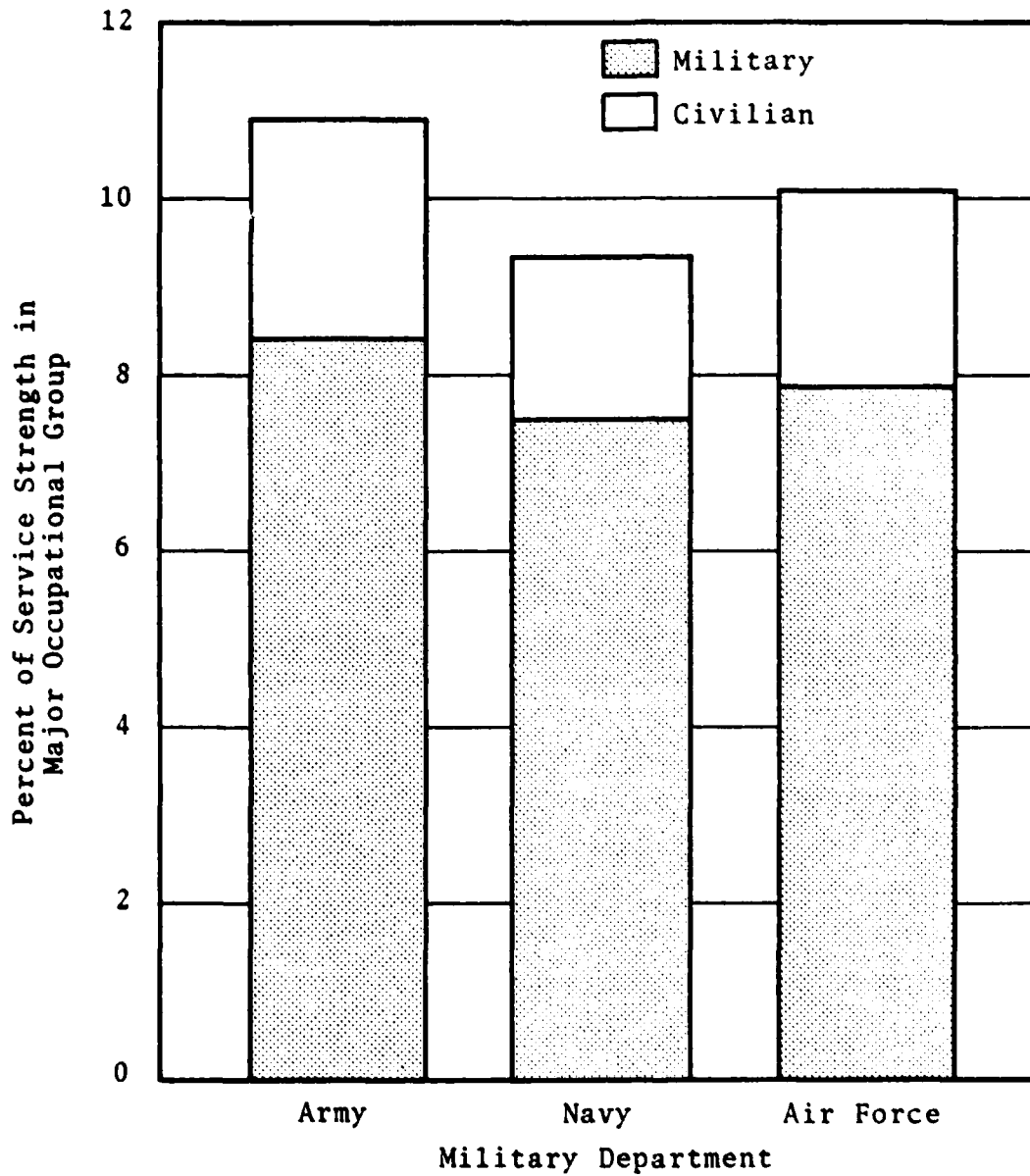


FIGURE B.5
PERCENT OF MILITARY DEPARTMENT STRENGTH IN
MAJOR OCCUPATIONAL GROUP,
SERVICE PERSONNEL

PRESEARCH INCORPORATED

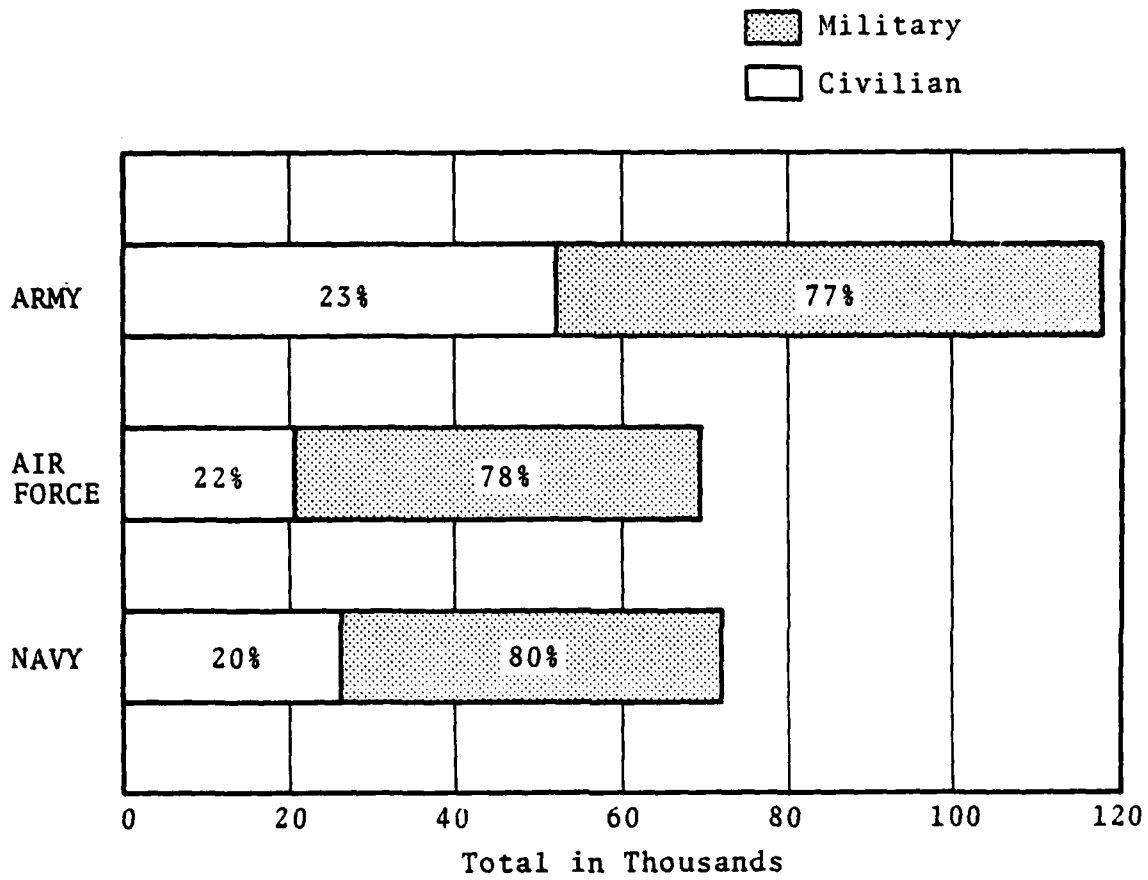


FIGURE B.6
TOTAL MILITARY DEPARTMENT STRENGTHS
IN MAJOR OCCUPATIONAL GROUP,
SERVICE PERSONNEL

PRESEARCH INCORPORATED

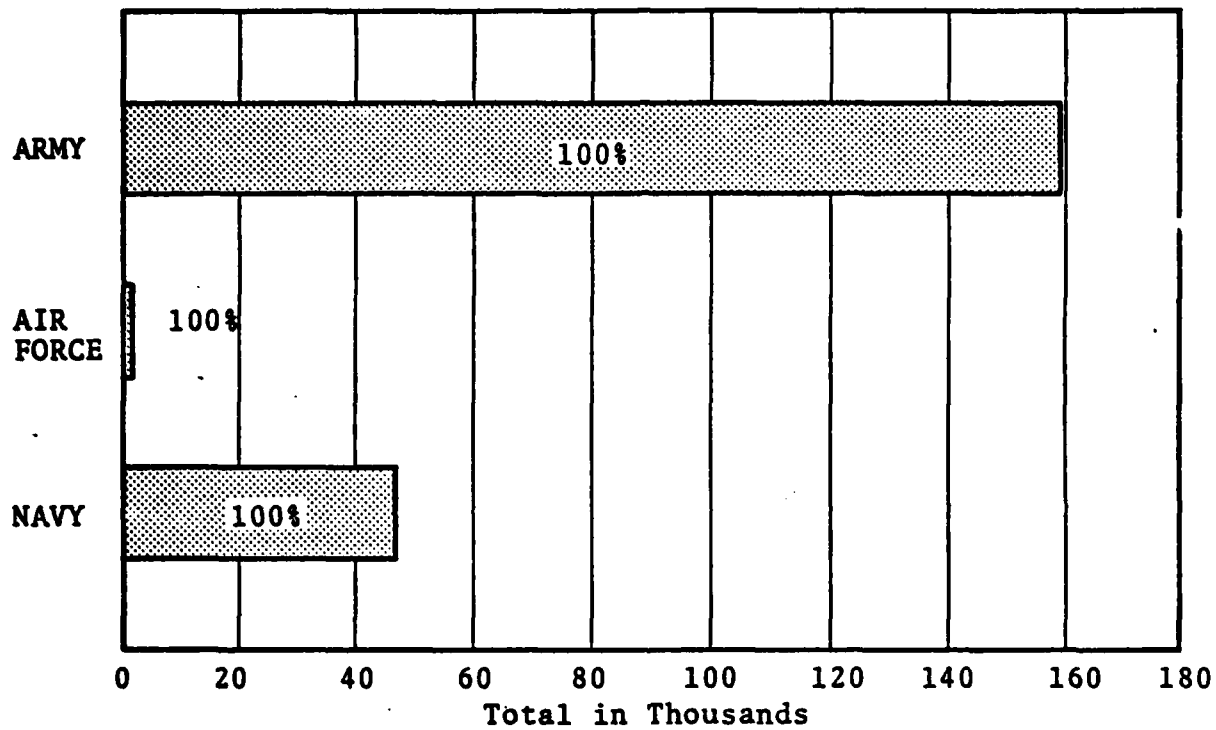


FIGURE B.7
TOTAL MILITARY DEPARTMENT STRENGTHS
IN MAJOR OCCUPATIONAL GROUP,
MILITARY-UNIQUE PERSONNEL